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THE

Petroleum Review,

WITH WHICH IS INCORPORATED

“Petroleum.”

ESTABLISHED 1899.

INDEX.

Vol. 18.—January to June, 1908.

LONDON:

Editorial and Publishing Offices: 45, St. Mary Axe, E.C.

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ADVERTISING RATES ON APPLICATION.

The Petroleum Review.

By PAUL DVORKOVITZ.

Vol. XVIII. (New Series.)

JANUARY 4TH, 1908.

No. 415.

Editorial Notes.

The current issue of the PETROLEUM *This Week's* REVIEW, which, by-the-bye, marks the "Review." commencement of our XVIII. volume, will be found to be of more than usual interest to our readers throughout the world, yet especially to these who business is wrapt up in the oil trade of this country. In the contents are not only included the first of a series of articles dealing in a retrospective form with the development of the industry, but special diagrams illustrate at a glance the London prices of American, Russian and Roumanian kerosene for the twelve months, as compared with the quotations ruling for the year 1906, the prices of Pennsylvanian and Baku crude, while the imports into this kingdom of petroleum products for the past year are also commented upon. Other articles, exceedingly *apropos* for this season of the year, tend to make this week's issue of special interest.

From the pen of no less a person than the vice-president of the Standard Oil Company. *The Standard Oil Company.* Oil Co.—Mr. John D. Archbold—we publish in this issue of the REVIEW an article dealing with the history of that remarkable organisation, which deserves the careful consideration of every fair-minded reader. Mr. Archbold speaks with authority, and as one who has been and still is most intimately acquainted with the company, and we have no doubt that his timely article, which goes deeply and seriously into facts and figures, will do much to put an end to that persecution from which the great organisation has suffered in the past. To those who have hitherto been at all times willing to raise their voice against that great organisation, which has been the basis of the American petroleum industry, we would say, read the article, which we now have the privilege to publish, in its entirety. It will then be possible to gain a full understanding of the development of the company, and the great part which it has performed in regard to the growth of the American petroleum industry.

We publish elsewhere the figures of the production of crude oil at the Baku oil fields during November, which will be seen to have been just over 38,000,000 poods. This total, although slightly above the September and October production, is considerably below the 42,000,000 to 43,000,000 poods per month, which in the first half of 1907 was taken as a sign of coming increase in production. Work at the oil fields, however, is proceeding with the greatest energy, and people are now coming to the conclusion that under the existing technical conditions of exploitation there is scarcely room for any hope of any considerable increase in output. The striking of a spouter by Messrs. Nobel on the Tcheleken island, although an interesting fact in itself naturally can not have any influence upon the Baku market. In the

Volga centres, now that the navigation is closed, the stocks are found to be short of the requirements. For this reason, the leading oil distributors are keeping prices very firm, but the trade is everywhere very quiet. The Batoum oil export trade toward the middle of December became more level, and shipments in one week reached the recently unheard of figure of 976,000 poods. The Surakhany field, the scene of the recent spouter, continues to attract general attention, and boring is carried on there with great activity. Until the present time, Surakhany has been known only as a gas field, but even as such it can prove of great value to the petroleum industry, as the natural gas can be delivered to the oil fields and used as fuel for the boilers and as motive power in other ways, thus releasing for marketing purposes an enormous quantity of crude oil which is now burnt at the fields.

The Galician petroleum producers are loud in their complaints against the Austrian Government for not assisting them out of their present difficulties. They ask not merely for temporary relief, such as measures for the building of tanks, loans on crude oil, etc., which the Government has already partly granted, but for a radical change which would place the petroleum industry upon a permanent basis for development. The chief complaint of the producers is against the exorbitant tax levied by the State on illuminating oil, which keeps the home consumption so low, whilst gas and electricity, the competitors to petroleum, are exempt from taxation. Mr. Albert Fauck, the well-known boring engineer in Galicia, in an article which appears in *Naphta*, points out that during the 27 years of the existence of the petroleum tax, the Austrian Government has received from the petroleum industry no less than 450,000,000 kronen, the Austrian refineries 150,000,000 kronen, and the iron industry about 50,000,000 kronen, and it is, therefore, the first duty of the State to protect the industry, and give a chance to develop it by removing the present handicap. Moreover, petroleum is the only great natural asset possessed by Galicia capable of giving employment to its population and stimulating its industrial life. As necessary radical remedies, Mr. Fauck proposes either the abolition of the tax on petroleum, or the imposition of an equivalent tax on other illuminants, such as gas, electricity, acetylene, alcohol, etc., and adds a recommendation to make the sale of illuminating oil a State monopoly. Under such conditions the price of crude oil could be advanced to the remunerative level 40 to 50 kronen per ton, whilst of the present total production about one-third could be sold in the country and two-thirds used partly for fuel purposes and partly for export. Without drawing any parallels, it is an interesting fact, that whilst in Galicia monopolisation by the State is prayed for by the producers as help against low prices, in Russia, on the contrary, total freedom is demanded by consumers as a remedy against high prices.

MESSRS. H. E. MOSS & CO'S. STEAMSHIP CIRCULAR.

In their semi-annual circular, Messrs. H. E. Moss & Co. state that the amount of new tonnage added to their registry for the year ending December, 1906, was about 2,000,000 tons, but in contrast to this for the year just ended, although the figures are not yet published, they anticipate the output will be about 1,600,000 tons, most of which were contracted for prior to 1907.

Orders for new steamers except for liners, are now very scarce; most builders have already felt the strain, and are very anxious for work, so much so that the competition is much keener than it has been for a long time past, and prices are fully 6 per cent. lower than they were 12 months ago. The price of steel has fallen at least 10s. per ton, and with other material, must go still lower. Wages are also on the downward grade, and they cannot help but anticipate a further decline of prices in 1908. Several new steamers which are on the builder's hands can now be bought much below cost price, and cheaper than they could be built.

Second-hand steamers are coming into the market in considerable numbers, and most naturally depreciate in value, as buyers are presently very scarce, and with freights almost profitless, except chiefly from the Plate and U.S., it is difficult to find remunerative employment.

That 1907 has been a disappointing year to shipowners is undeniable, except for the liners engaged in the American and some few other trades, which have done fairly well.

The grand achievement of the Cunard Co. in having built the magnificent steamers "Lusitania" and "Mauretania," thus regaining from our German friends the Blue Riband of the Atlantic, is convincing testimony of the superiority of the turbine engines for high-speed steamers, they having proved an unqualified success, and the year 1907 may be looked upon as being the most notable within the memories of most of us, as far as naval architecture and marine engineering are concerned. That the internal combustion engine will be largely adopted for marine propulsion some people seem certain about, but in our own opinion, its being made a commercial success on a large scale for some years to come is at least doubtful. Liquid fuel for steamers engaged principally in the Pacific and elsewhere, where coals are so dear, is now, however, to be considered as a recognised factor, and no doubt it will be more generally used in the near future.

OPERATIONS IN THE BAICOI-TINTEA FIELD.

At Baicoi the Steaua Romana is now drilling four wells, the results of which are awaited with great interest, as they will decide the question of the extent of the oil zone of the prolific wells, No. 6 of the Steaua and No. 2 of the Trajan Co. Well No. 6 is now undergoing repairs and will shortly come back on the producing list. Well No. 22 has reached an oil sand at a depth of 50 metres. The sand is fine and rich in mica, as was the case with the sand in well No. 6.

A trial boring will probably be put down on the Sfetescu plot in one of the hand-dug wells.

The Regatul Roman Co. is now repairing its well No. 6, which had reached the oil stratum some months ago, but in which the casing was damaged during the clearing operations. The company's well No. 9 has reached an oil sand at 220 metres and is now being cleared out. In well No. 7 on the outside plot of the Sfetescu property, drilling continues. It has reached a depth of 750 metres so far without any result. The company's boring operation in the southern part of the field have been suspended.

Well No. 1 of the Trajan Co. has now reached a depth of 580 metres without striking the oil stratum which its well No. 2 struck at 280 metres, which shews that the

dip of the strata at this point has an angle of more than 80 degrees. Well No. 2 is still yielding from 60 to 70 tons of crude oil daily.

Well No. 1 of Messrs. G. Dobrescu and Co. (now belonging to Messrs. Jean Ganz and Co.) is being drilled beyond the sand stratum found at 245 metres. This sand yielded only a very small quantity of a thick oil of a gravity of 0.910-930.

The Credit Petrolifer has suspended work on their wells Nos. 1 and 2 at Baicoi.

The Romano-American Co. has abandoned its two wells which it has drilled on the Langeveld plot, and which it brought down to 300 metres without finding any oil. It has also abandoned its well No. 1 on the Speranta plot at a depth of 400 metres.

The Steaua Romana has commenced exploitation of its lands at Tintea, and in view of the vast technical and financial resources at the disposal of the company, great developments are expected in this field.

The Alfa Co. has two wells Nos. 5 and 8 in exploitation, yielding together 30 to 40 tons of oil daily. Mr. J. Koster's borehole is producing about 20 tons per day.

LONDON OIL SHARE MARKET.

FRIDAY, JANUARY 3RD, 1908.

The period that has elapsed since our last issue has been a very quiet one on the Stock Exchange, and the intervention of the Christmas Holidays, and subsequently that of New Year's Day, has considerably curtailed the number of working days. The decision of the Directors of the Bank of England yesterday (Thursday) to lower the Bank Rate to 6 per cent. was quite unexpected, it being without precedent to have a reduction during the first week in the year. This can only be regarded as a very favourable sign that the severe monetary stringency is almost at an end, and the gradual return to more usual rates of interest may be looked for with confidence.

After a fall of 1s. per share in Shell Transports to 40s. 6d. to 41s. 6d. on the 23rd ult., the next move to record was an improvement of 6d. in Russian Ordinary at 3s. to 4s., and of $\frac{1}{16}$ in Californian Oil Fields at $5\frac{5}{8}$ - $5\frac{7}{8}$ on the 27th, while on the subsequent day the latter stock improved a further $\frac{1}{16}$ to $5\frac{3}{4}$ -6. On the 30th, Shell Transport Ordinary were slightly weaker at 40s. to 41s., thus shewing a shrinkage of 6d. per share, but Californian Oilfields retained their strength, closing on balance up another $\frac{1}{8}$ at $5\frac{7}{8}$ - $6\frac{1}{8}$, although on the following day a few sales put the price back again to the preceding day's figure of $5\frac{3}{4}$ -6. The Refineries were also easier at the wide price of $\frac{1}{2}$ -1.

On the re-opening of the market on January 2nd, Californian Debentures and Russian $5\frac{1}{2}$ per Cent. Debentures were both quoted ex-dividend at 93, 96, and 74, 77 respectively, and Shell Transport Preference rose $\frac{1}{16}$ at $9\frac{1}{16}$ - $9\frac{1}{8}$.

At the last account for the year rates on Contango ruled a little easier, and a comparison of making-up prices with those fixed at the Mid-month Settlement shews the only improvements that have taken place to be in Baku Preference, which rose 3d. at 4s. 6d., and Californian Oil Fields $\frac{1}{4}$ at $5\frac{3}{4}$. On the other hand, Russian Ordinary lost 6d. and the Preference 3d. at 2s. 9d. and 4s., while Schibaieff Ordinary and Preference were both $\frac{1}{16}$ lower at $\frac{1}{8}$ and $1\frac{5}{16}$, and Shell Transport Ordinary lost 2s. 3d. at $2\frac{1}{16}$. No change occurred in either Anglo-Russian at 1s., Baku Ordinary at $\frac{1}{8}$, or Spies at 7s.

The Petroleum Trade of England during 1907.

A BRIEF RETROSPECT.

The year which has just closed can truly be said to have not only witnessed a very conspicuous advancement in the oil trade of this country, but to have been on the whole, very satisfactory to all concerned. It is a year which has stood out conspicuously from among its predecessors, for during its run, a decidedly healthy tone has permeated the petroleum trade of the United Kingdom. Some of those engaged in the great work of the distribution of petroleum products throughout the length and breadth of the land, may, perhaps be inclined to look upon 1907 as a year when profits might have well been more remunerative, yet, all things considered, the twelve months just closed, have come up to expectations.

The past year has seen progress in many directions, notably in regard to the extended use of petrol for the demands—the ever-increasing demands—of the motor industry, and also in regard to the more general adoption of liquid fuel. Both these subjects are matters of inestimable importance for the welfare of this country's trade in oil products, and as time goes on, we shall witness—we have no doubt—even greater progress achieved in this direction. In other directions, too, the foundations of wide expansions were moulded afresh, all of which events have their own peculiar significance as tending to place the oil trade of this country in a more important position in the category of commerce than it has enjoyed hitherto.

Cut-throat competition in regard to the distribution of petroleum throughout our land has, we hope, now become a thing of the past, and we view that more friendly spirit which has characterised the dealings of those firms interested in the distribution of petroleum and its allied products, with the greatest gratification.

The English oil market may be referred to as having been consistently steady throughout the past year, with an inclination to strengthen as the year went on, while during 1906, the inclination for nine months of the twelve was toward a downward tendency. Commencing the year with American oil at 6½d.-6¾d., there was a steady advance toward mid-summer, and this became more apparent in the autumn, until now we find the market standing at 7½d., or as high a price as it has been for the twelve months. During 1906 there were a few weeks when American kerosene was down to 6d. per gallon, but for over three months of the past year it has touched 7d. and even above. Both Russian and Roumanian oils have, naturally maintained prices in proportion with those for the American product, both being generally quoted one-halfpenny per gallon lower. During the past year, however, Roumanian illuminating oil has come very conspicuously to the front, and on the whole commands on the English market, prices frequently in excess of those obtained for the oil from the Caucasus.

More than passing reference must be paid to the

various imports of petroleum products into the United Kingdom during the year. The total imports for 1907 are some 8,000,000 gallons ahead of those for 1906—a matter which is very gratifying in itself. America has, during the year furnished more oil to this country than it did during the preceding year, the difference being approximately 10,000,000 gallons. The Dutch Indies have likewise considerably improved their position, and during 1907 were responsible for no less than 23,000,000 gallons to this country, this being totally made up of motor spirit. Roumania, too, has gone forward and for the year its imports to the United Kingdom have been 14 per cent. greater than ever before. Russia is the only producing country which has decreased in its shipments of petroleum products, yet toward the end of the year these became more substantial, and the result is that the decrease for the year is only slight. The remarkable rise of the Dutch Indies as suppliers of motor spirit to this country, forms one of the most striking characteristics of our import trade for the year. During the year 1904, America and the Dutch Indies imported practically the whole of the spirit we required, the figures being about 5,000,000 gallons in each case. The intervening time, however, has brought about many changes. These were apparent a year ago, when for 1906, the Dutch Indies furnished the United Kingdom with double the quantity of benzine as did America, but for the last twelve months the Far Eastern spirit has made rapid strides, while America has gone a step backward, with the result that for 1907 the figures are three to one in favour of the Dutch Indies.

So far as illuminating oil is concerned America more than holds its own, for while the total imports under this heading are practically the same as those for 1906, Russian shipments have decreased, and it is this decline that has been made up by increased imports from the States.

In regard to lubricating oil, the totals shew some reduction when compared with those of 1906, the imports from America and Russia both being approximately 2,000,000 gallons less than in 1906. The imports of solar oil for gas enrichment purposes have slightly increased, the honour for this being jointly shared by America and Roumania, but here again, Russia comes badly. Our imports of fuel oil shew considerable diminution, the figures being little more than half what they were in 1906. This, however, is accounted for by the fact that during 1906, consequent upon the decision of the Admiralty to utilise the new fuel, a number of shipments came over and went into storage in order to be ready in case of need. During the past year, these stocks have been drawn upon to a considerable extent in addition to a number of shipments being received. The figures, therefore, of the total shipments of fuel oil to this country during 1907 convey a totally wrong impression, for, on the face of it, they suggest that the

demand must have been declining for the past twelve months. As a matter of fact, the contrary is the case, for the demand for oil fuel in this country is only limited by the difficulty which still appears to be present, of securing large forward contracts.

[In our next issue we hope to deal with the question of English investments in the petroleum industry, and refer to the progress recorded during the past year.—*Ed. P.R.*]

THE SCOTTISH OIL TRADE.

The year which has just closed has, says the *Glasgow Herald*, been characterised by improved prices in nearly all the products and by reductions in none. For instance, burning oil has advanced by no less than 1½d. per gallon—from 5½d. to 6½d.—and the price is firm at that. Naphtha, now a very important product since its adaptability to propel motor cars, has nearly doubled its price in the twelve months, having risen from 5½d. to 10d. per gallon. Other liquid products, such as lubricating and gas oils, have increased in value by £1 per ton, and paraffin wax and sulphate of ammonia have remained stationary.

Whilst the markets have thus been distinctly favourable to the Scotch oil companies, the per contra in the form of working costs began to loom early in the year, and very soon thereafter demands were made by the coalmasters for a higher price for fuel, followed by a request for more wages by the shale hewers and other oil workers.

To the credit, be it said, of the joint interests of men and masters, they were able to come to terms on each occasion, when the circumstances arose without a wheel ceasing to turn or without a discordant note being heard. Another laudable instance of the friendly relations existing between capital and labour, based upon the sound common-sense award of Sheriff Jameson (now Lord Ardwall), issued about four years ago upon a memorable shale miners' dispute. Unusually heavy rains during a great portion of the year also added to the cost of conducting the oil works, particularly in the mining departments.

Arising from from these three causes, the extra revenue received on the one hand was to a very considerable extent distributed amongst the interests just referred to, and what at one time looked like a record year of profits to the trade has been dispelled by these higher costs. In the circumstances, therefore, if the same dividends are maintained as were declared last year when the books are made up, shareholders ought to be thankful.

These comments are made, keeping in view one notable exception, viz., the Pumpherstons Oil Co., which exceeded the most sanguine anticipations of its shareholders last summer by declaring a dividend of 50 per cent. and adding largely to its reserves and depreciation funds, besides paying off debentures.

This modernly equipped and well managed company, along with its junior accessory, the Tarbrax Oil Co., acquired several thousands of acres of valuable coalfields during the year, and these are proving a practical utility

by outputs in the process of being produced and supplying the various oil works owned by these companies with fuel, and thus effecting considerable savings, against buying supplies of coal in the open market.

We append our usual list of prices in the oil group from the Stock Exchange list, showing the rise and fall in the twelve months under review:—

	Dec. 24, 1906.	Dec. 24, 1907.	Rise.	Fall.
Pumpherstons	£6½	13½	6½	—
Tarbrax	39/	55	16/	—
Broxburn	46/	37/6	—	8/6
Oakbank	43/	30/6	—	12/6
Young's Ordinary ..	77/6	67/6	—	10
Young's B Debentures	£180	165	—	15

Besides the appreciation in value of 6½, or 100 per cent., in Pumpherstons shares, it is worthy of notice to mention that Tarbrax shares have risen about 50 per cent. in the same time, without a dividend having yet been declared.

It is not quite such an easy task to forecast what may transpire in the Scotch oil shale trade a year ahead, keeping in view that there are decided signs throughout the world of trade generally being on the down grade; and were we to trust to the well-known Scotch oil makers' axiom that "oil profits are always good when other trades are upon the wane," then we would not hesitate to predict that another good year is in front of shareholders.

A most important factor having a direct bearing upon future costs of working is the extensive additions to plant proceeding at all the oil works, and which, when completed, will permit the maximum of work to be conducted at a minimum of cost, and thus prove once more in the history of the trade a most direct benefit to the profit and loss account of each company.

THE TIN PLATE MARKET.

Messrs. Norton, Owen & Co., of 4, Bishopsgate Street Within, London, E.C., report under date January 1st, 1908, as follows:—

The demand through the greater part of 1907 has been good, and on the whole there has been a considerable expansion of trade, as will be seen by the particulars of the shipments to end of November last given at foot. Latterly there has been a falling off in shipments and prices. At the commencement of the year when steel bars were £6 5s. and tin £188, oil sizes, 18½ by 14, were fetching 15s. 4½d. and 20 by 10, 21s. 9d., whereas to-day with steel bars at £5 and tin at £123 10s., they are quoted 12s. 4½d. and 17s. 6d. respectively f.o.b. Wales, tin lining and iron hooping extra.

SHIPMENTS OF TIN PLATES.

		Eleven months ended November.			
		Quantity.		Value.	
		1906 Tons.	1907 Tons.	1906 £	1907 £
Russia .. ..	..	3,234	6,178	41,135	79,475
German .. ..	..	33,603	38,188	458,640	562,553
Netherlands ..	..	24,862	26,860	336,810	411,430
Belgium .. ..	..	10,979	7,737	146,222	117,250
France .. ..	..	22,677	23,269	296,712	339,759
Portugal .. ..	..	9,583	9,378	120,280	133,196
United States ..	..	54,735	55,478	701,866	781,184
British East Indies	..	45,826	50,961	619,058	769,997
Australia .. ..	..	14,848	13,071	189,971	196,183
Canada .. ..	..	18,473	19,573	242,026	274,844
Other countries ..	..	105,433	122,436	1,373,480	1,784,823
Total	Tons	344,253	373,134	£4,526,200	£5,450,694

NEW ENGLISH PATENT FOR THE SPRAYING OF PETROLEUM.

A patent has recently been granted to Mr. Peter Valentine McMahon, of 195, Clapham Road, London, for an invention relating to improvements in and connected with apparatus for spraying or pulverising liquids such as petrol or petroleum.

According to the invention, use is made of a spraying device comprising a jet consisting of a cup-shaped head or a head having a conical cavity, the apex of the cone forming the bottom of the cavity into which air under pressure is forced. The petrol or petroleum to be sprayed or pulverised by the air issuing through the bottom of the cavity is introduced into the said conical cavity either at the bottom thereof or preferably at the top and in such a manner that it flows evenly down the sides of the cavity and so meets with the issuing jet of air by which it is pulverised and ejected. In practice, in order to obtain a more even distribution of the petrol or other liquid, a trough or V-shaped groove is provided around the top of the cavity, the inner rim or edge of the said groove being at a lower level than the outer rim or edge so that the liquid, when supplied by any suitable means to the groove, overflows over the inner edge and passes in an even manner down the conical sides of the cavity to meet the issuing air jet.

In applying the invention to the carburation of air for the production of an explosive mixture for use in internal combustion engines the patentee locates the spraying device in a chamber which may be suitably heated by the exhaust gases from the motor or by the water from the water jacket of the cylinder. The temperature at which the chamber is maintained is advantageously such that the fine spray produced by the jet is converted into gas and prevented from condensing upon the walls of the chamber or of the pipes in connection therewith. The air for mixture with the pulverised petrol or other liquid is drawn in and around the spraying device and its quantity may be controlled either before its entry

into the chamber containing the spraying device or before passing to the cylinder on leaving the said chamber.

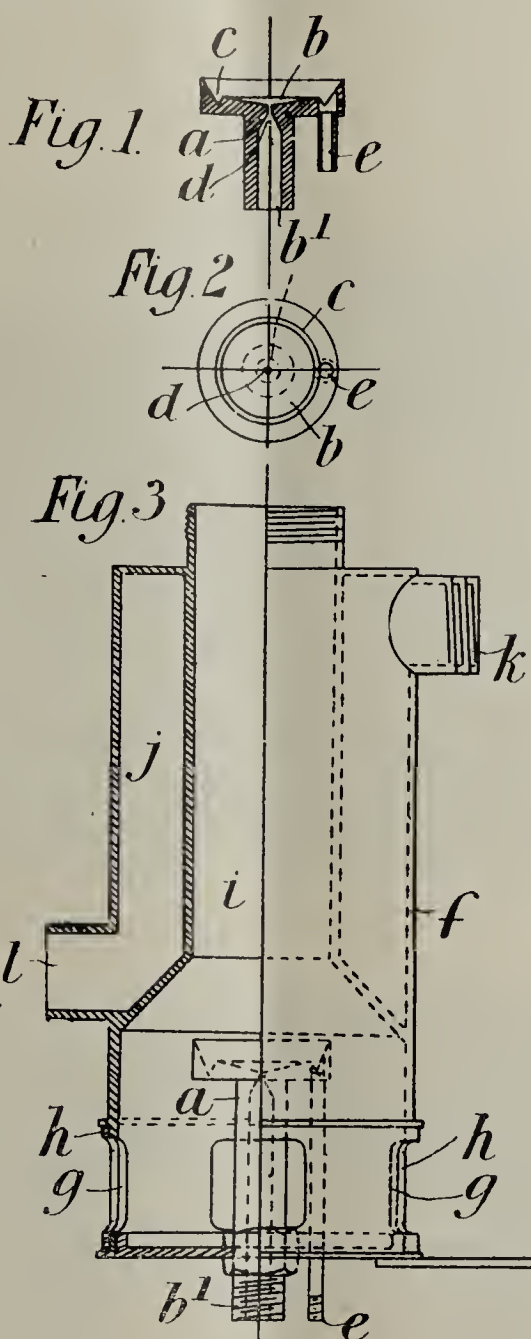
The air which is utilised for spraying or pulverising the liquid may vary in quantity and in pressure without very materially affecting the operation of the device. In practice, however, it is advantageous to maintain the pressure at about one and a-half to two pounds per square inch. Air at this pressure may be conveniently supplied by a small pump worked by the motor. Or, in lieu of such air, a portion of the products of combustion from the engine may be employed.

Referring to the illustration, *a* is the head of the jet, which is cup-shaped or provided with the conical cavity *b*; *c* is the trough or V-shaped groove around the top of the said cavity and *d* is the small hole in the centre of the conical cavity *b* through which the air or exhaust gases issue into the same; *b¹* is the pipe for supplying the air or exhaust gases, and *e* the pipe for conveying the liquid to be sprayed up to the groove *c*.

The operation of the spraying device is as follows:—Air under pressure, or a part of the exhaust gases from the engine, issues through the small hole *d* in the centre of the conical cavity *b*, whilst the liquid to be sprayed enters the groove *c* by means of the pipe *e*, as above described, overflows, and falls down the side of the conical cavity, thus meeting the air or exhaust gases issuing from the inlet hole *d* and being pulverised or sprayed. The spraying action is due to a thin film of liquid being held over the edge of the hole *d* by surface

tension, and being caught by the upward passage of the air.

The angle of the side of the conical cavity *b* which gives the best results, is approximately 130 deg., but it may be more obtuse or acute without materially affecting the action of the sprayer; in fact, the sprayer will work satisfactorily if the sides of the conical cavity are sufficiently inclined to ensure a film of liquid being maintained around the small hole through which the spraying air enters.



CLASSIFIED IMPORTS INTO UNITED KINGDOM UP TO DECEMBER 30th, 1907.

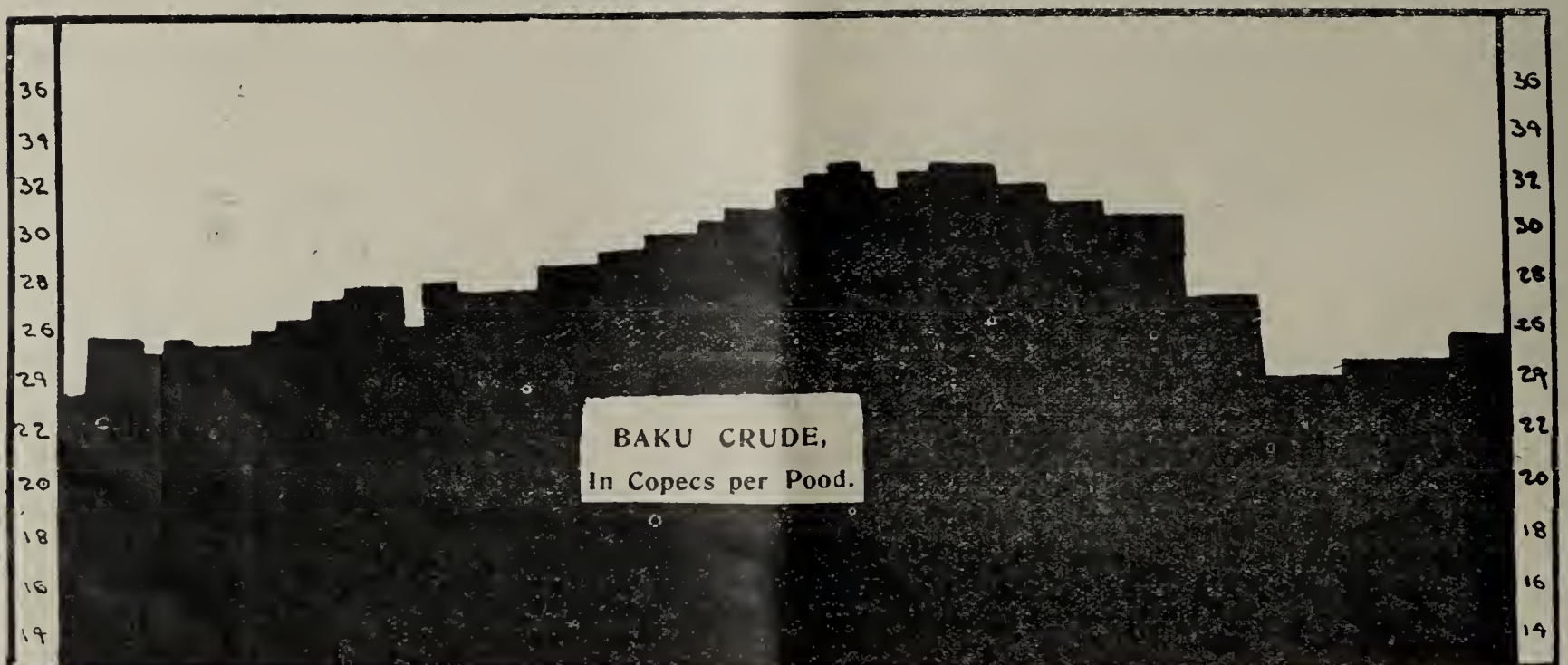
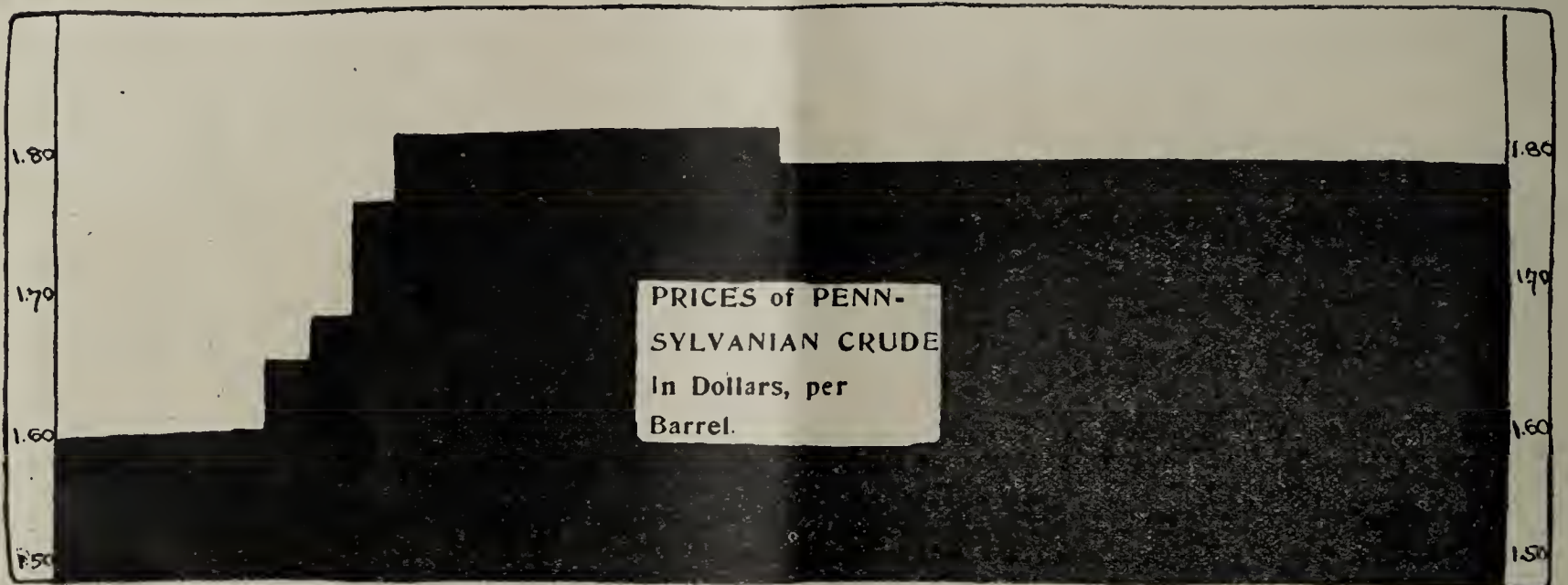
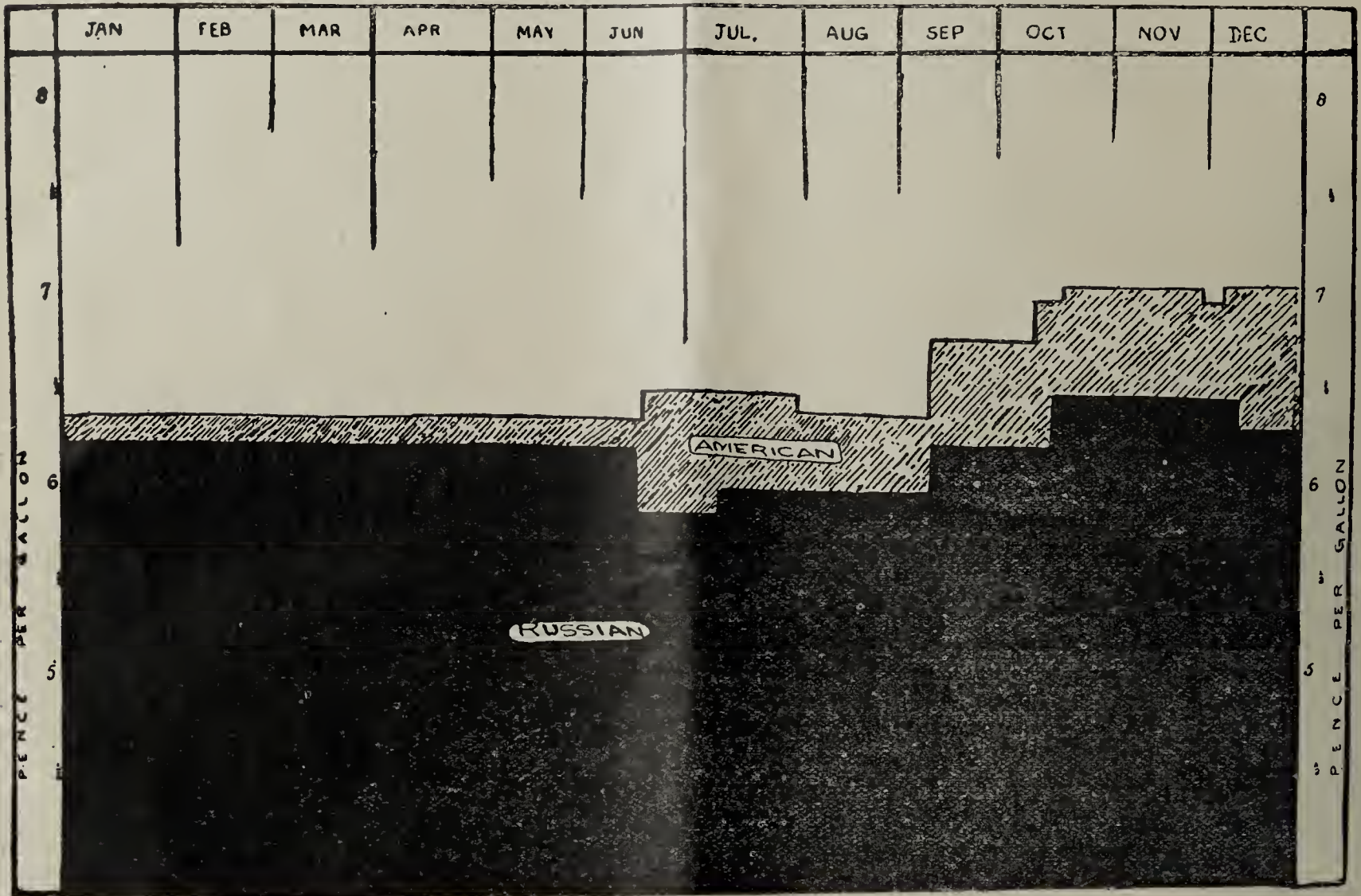
IN GALLONS.

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COUNTRY.	ILLUMINATING.		LUBRICATING.		RESIDUALS.		GAS OIL. (Solar)		BENZINE.		FUEL OIL.		OTHER DESCRIPTIONS.		TOTALS.	
	Since Dec. 16.	From Jan. 1.	Since Dec. 16.	From Jan. 1.	Since Dec. 16.	From Jan. 1.	Since Dec. 16.	From Jan. 1.	Since Dec. 16.	From Jan. 1.	Since Dec. 16.	From Jan. 1.	Since Dec. 16.	From Jan. 1.	Since Dec. 16.	From Jan. 1.
Austria ...	—	—	—	84,240	4,200	71,970	—	—	—	—	—	—	—	—	4,200	156,210
Belgium ...	—	153,850	25,240	744,331	—	—	—	310	—	4,120	—	—	—	860	25,240	903,471
Canada ...	—	—	—	—	—	8,800	—	—	—	—	—	—	—	—	—	8,800
Dutch India ...	—	—	—	—	—	—	—	—	624,580	23,866,310	—	73,500	—	—	624,580	23,939,810
Germany ...	22,130	2,900,697	37,460	1,439,501	—	2,000	—	70	—	80	—	—	240	5,380	59,850	4,347,728
Holland ...	—	1,070	—	27,950	—	—	—	—	35,840	627,170	—	163,340	—	138,110	35,840	957,640
Roumania ...	—	7,039,290	—	—	—	—	—	7,307,490	—	1,459,000	—	238,700	—	—	—	16,044,480
Russia ...	1,058,350	29,577,550	798,500	4,646,850	—	125,960	—	837,040	—	321,690	—	—	—	1,423,780	1,866,850	36,982,870
U.S.A. ...	7,625,360	108,562,777	1,549,780	39,709,608	—	860,120	3,583,240	52,880,650	—	7,216,642	—	5,677,570	31,380	1,888,300	12,789,760	214,795,667
Other Countries	—	950	3,670	84,135	—	4,760	—	—	—	2,500	—	40	160	140,480	3,830	232,965
	8,715,860	148,236,184	2,414,650	46,735,715	4,200	1,073,610	3,583,240	59,075,560	660,420	33,497,512	—	6,153,150	31,780	3,596,910	15,410,150	298,369,641

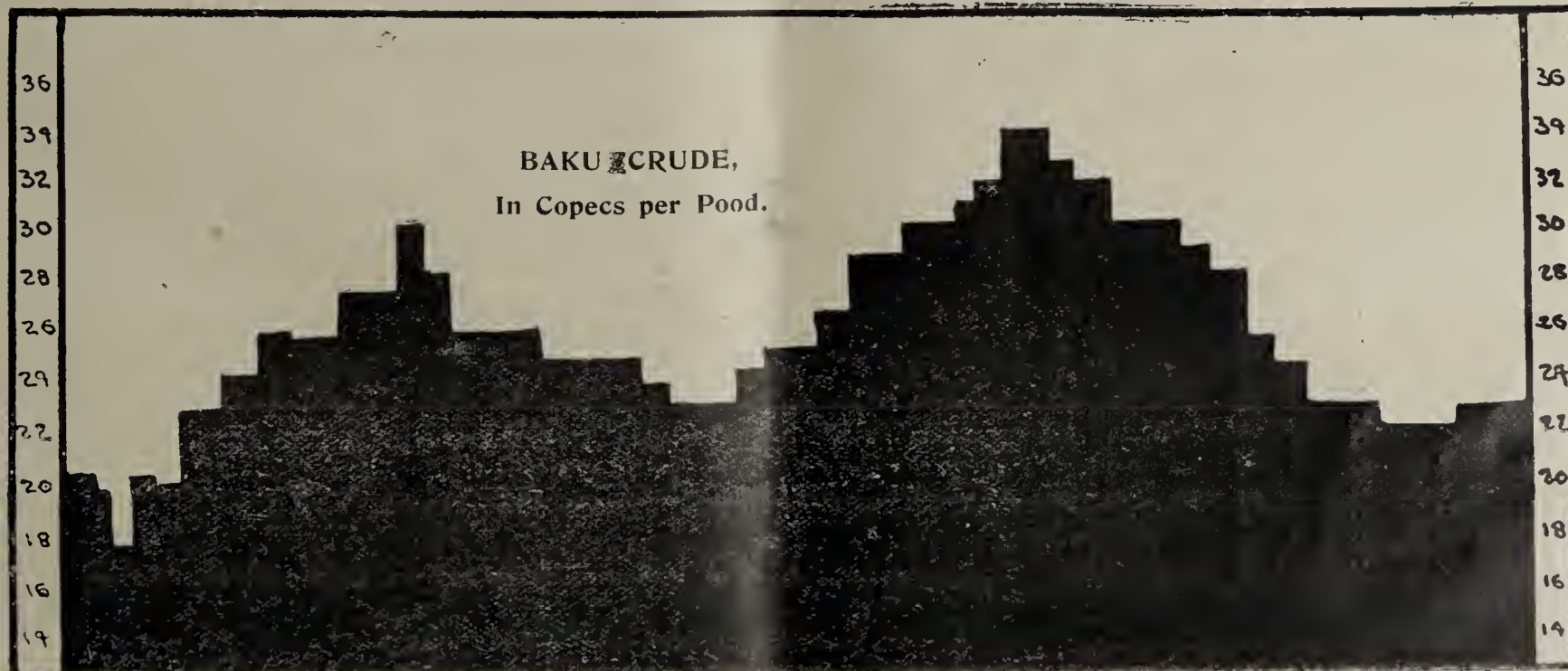
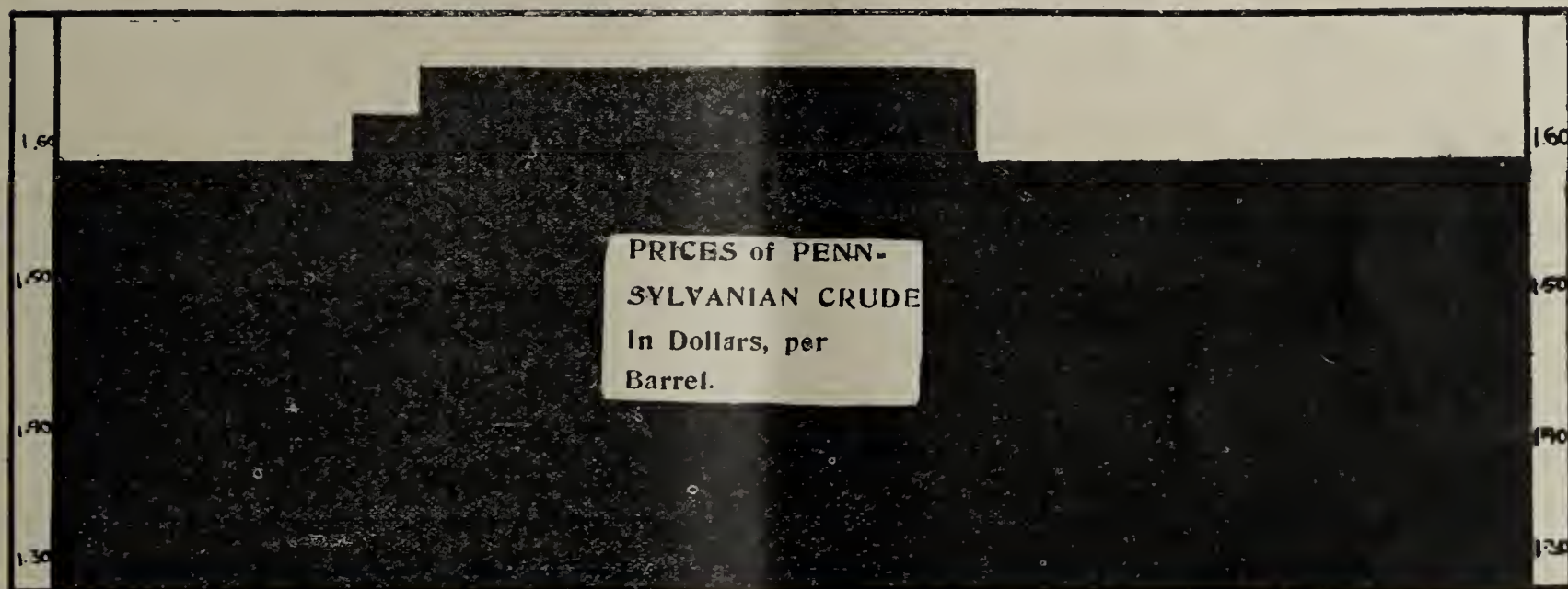
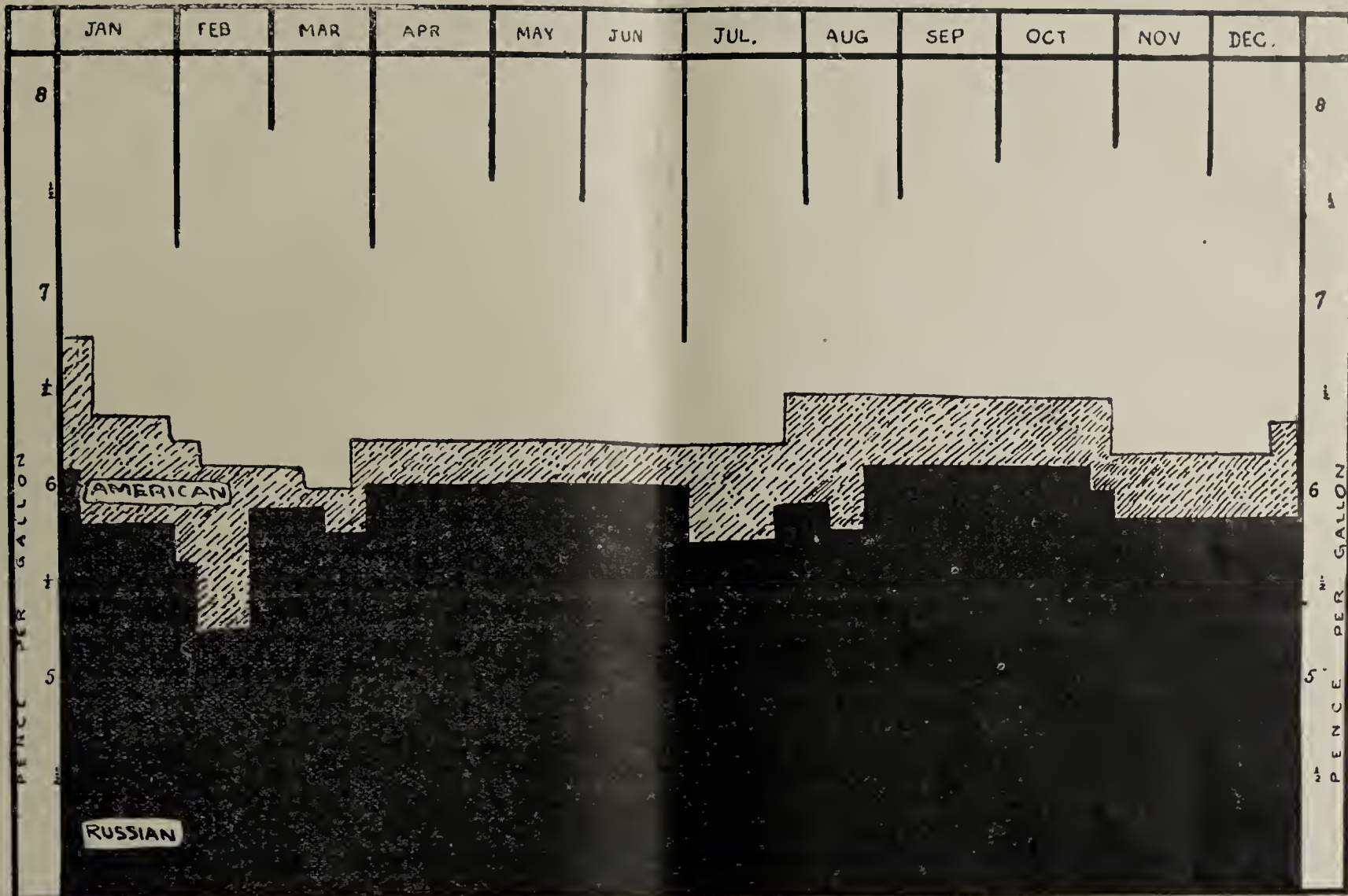
QUOTATIONS AT A GLANCE.

London Prices of American and Russian Refined Oil during 1907.



LONDON PRICES OF AMERICAN AND RUSSIAN REFINED OIL DURING 1906.

The Designs on this page afford an interesting comparison with the Tables opposite, shewing the rise or decline of prices during the years 1906 and 1907.



WEEKLY PRICES OF AMERICAN AND RUSSIAN PETROLEUM IN THE RESPECTIVE COUNTRIES
DURING THE YEAR 1907.

AMERICAN.								RUSSIAN.				
CRUDE.				REFINED IN NEW YORK				REFINED.		CRUDE.	RESIDUALS	
(dollars per barrel.)				(cents per gallon.)				For Export.	For Inland.			
Week ending.	Penn.	N. Lima.	S. Lima.	Bulk.	Cases.	Barrels.			Copecs per Pood.			
January 5	1'58	0'90	0'85	4'50	10'25	7'75	January 1	25½	—	23	24½	
12	1'58	0'90	0'85	4'50	10'25	7'75	8	—	—	25½	26½	
19	1'58	0'90	0'85	4'50	10'25	7'75	15	—	—	25½	26½	
26	1'58	0'90	0'85	4'50	10'25	7'75	22	—	—	—	—	
February 2	1'58	0'90	0'85	4'50	10'25	7'75	29	27	27	24½	26½	
9	1'58	0'90	0'85	4'50	10'25	7'75	February 5	—	28	25½-25½	26½	
16	1'58	0'90	0'85	4'50	10'25	7'75	12	—	27	25	27½	
23	1'58	0'90	0'85	4'50	10'25	7'75	19	27½	27½	25	27½	
March 2	1'63	0'92	0'87	4'65	10'30	7'80	26	27½	28	26	27½	
9	1'63	0'92	0'87	4'65	10'30	7'50	March 5	27	28	26½	27½	
16	1'66	0'94	0'89	4'70	10'50	7'95	12	30	28½-29	26½-26½	29	
23	1'66	0'94	0'89	4'70	10'65	8'20	19	32	—	27½	27½	
30	1'75	0'94	0'89	4'70	10'65	8'20	26	32	32	28	29½	
April 6	1'80	0'94	0'89	4'70	10'65	8'20	April 2	30	31	26½	27½	
13	1'80	0'94	0'89	4'70	10'65	8'20	9	32	29½	27½	29½	
20	1'80	0'94	0'89	4'70	10'65	8'20	16	32	29	27½	29½	
27	1'80	0'94	0'89	4'70	10'65	8'20	23	32	29	27½	29½	
May 4	1'80	0'94	0'89	4'70	10'65	8'20	30	32	29	27½	29	
11	1'80	0'94	0'89	4'70	10'65	8'25	May 7	34	34	27½	29	
18	1'80	0'94	0'89	4'70	10'65	8'25	14	34	34	28½	30½	
25	1'80	0'94	0'89	4'70	10'65	8'25	21	34	34	28½	30½	
June 1	1'80	0'94	0'89	4'70	10'75	8'35	28	34	34	30½	31½	
8	1'80	0'94	0'89	4'70	10'90	8'45	June 4	34	34	30½	31½	
15	1'80	0'94	0'89	4'95	10'90	8'45	11	34	33½	30½	32	
22	1'80	0'94	0'89	4'95	10'90	8'45	18	30½	30½	30½-31	31½	
29	1'80	0'94	0'89	4'95	10'90	8'45	25	—	35	31½	32½	
July 6	1'78	0'94	0'89	5'00	10'90	8'45	July 2	38	35	31½	32½	
13	1'78	0'94	0'89	5'00	10'90	8'45	9	45	45½	32	32½	
20	1'78	0'94	0'89	5'00	10'90	8'45	16	43	43	33	33	
27	1'78	0'94	0'89	5'00	10'90	8'45	23	43	43	32	32½	
August 3	1'78	0'94	0'89	5'00	10'90	8'45	30	43	42	31	31	
10	1'78	0'94	0'89	5'00	10'90	8'45	August 6	43	37½	32	31	
17	1'78	0'94	0'89	5'00	10'90	8'45	13	42½	37½	32	31	
24	1'78	0'94	0'89	5'00	10'90	8'45	20	42½	37½	32½	31	
31	1'78	0'94	0'89	5'00	10'90	8'45	27	42½	43½-44	32½	31	
Sept. 7	1'78	0'94	0'89	5'00	10'90	8'45	Sept. 3	42½	43½	32½	31	
14	1'78	0'94	0'89	5'00	10'90	8'45	10	—	43½-44	31½-32½	31	
21	1'78	0'94	0'89	5'00	10'90	8'45	17	—	43½-44	31½	31	
28	1'78	0'94	0'89	5'00	10'90	8'45	24	—	43½-44	31½	31	
Oct. 5	1'78	0'94	0'89	5'00	10'90	8'45	October 1	—	43½-44	31½-32½	31	
12	1'78	0'94	0'89	5'00	10'90	8'45	8	40	—	30-30½	30½	
19	1'78	0'94	0'89	5'00	10'90	8'45	15	—	—	—	—	
26	1'78	0'94	0'89	5'00	10'90	8'75	22	—	—	25½-26½	28½	
Nov. 2	1'78	0'94	0'89	5'00	10'90	8'75	29	—	—	—	—	
9	1'78	0'94	0'89	5'00	10'90	8'75	Nov. 5	—	—	23½	25	
16	1'78	0'94	0'89	5'00	10'90	8'75	12	—	—	—	—	
23	1'78	0'94	0'89	5'00	10'90	8'75	19	33	33	24½	25½	
30	1'78	0'94	0'89	5'00	10'90	8'75	26	33	33	24½	25½	
Dec. 7	1'78	0'94	0'89	5'00	10'90	8'75	December 3	—	—	24½	25½	
14	1'78	0'94	0'89	5'00	10'90	8'75	10	—	—	25½	—	
21	1'78	0'94	0'89	5'00	10'90	8'75	17	—	—	—	—	
28	1'78	0'94	0'89	5'00	10'90	8'75	24	—	—	25½	—	

PRICES OF AMERICAN, RUSSIAN AND ROUMANIAN REFINED OIL ON THE LONDON MARKET
DURING THE YEAR 1907.

AMERICAN.			RUSSIAN.		ROUMANIAN.					AMERICAN.		RUSSIAN.		ROUMANIAN.	
January	4	..	6½-6½	6½-6½	6½-6½	6½-6½	July	6	..	6½-6½	5½-6½	6½-6½	6½-6½	6½-6½	6½-6½
11	6½-6½	6½-6½	6½-6½	6½-6½	13	..	..	6½-6½	6-6½	6½-6½	6½-6½	6½-6½	6½-6½
19	6½-6½	6½-6½	6½-6½	6½-6½	20	..	..	6½-6½	6-6½	6½-6½	6½-6½	6½-6½	6½-6½
26	6½-6½	6½-6½	6½-6½	6½-6½	27	..	..	6½-6½	6	6½-6½	6½-6½	6½-6½	6½-6½
February 2	6½-6½	6½-6½	6½-6½	6½-6½	August 3	..	..	6½-6½	6	6½-6½	6½-6½	6½-6½	6½-6½
9	6½-6½	6½-6½	6½-6½	6½-6½	10	..	..	6½-6½	6	6½-6½	6½-6½	6½-6½	6½-6½
16	6½-6½	6½-6½	6½-6½	6½-6½	17	..	..	6½-6½	6	6½-6½	6½-6½	6½-6½	6½-6½
23	6½-6½	6½-6½	6½-6½	6½-6½	24	..	..	6½-6½	6	6½-6½	6½-6½	6½-6½	6½-6½
March 2	6½-6½	6½-6½	6½-6½	6½-6½	31	..	..	6½-6½	6	6½-6½	6½-6½	6½-6½	6½-6½
9	6½-6½	6½-6½	6½-6½	6½-6½	Sept. 7	..	..	6½-6½	6	6½-6½	6½-6½	6½-6½	6½-6½
16	6½-6½	6½-6½	6½-6½	6½-6½	14	..	..	6½-6½	6½	6½-6½	6½-6½	6½-6½	6½-6½
23	6½-6½	6½-6½	6½-6½	6½-6½	21	..	..	6½-6½	6½	6½-6½	6½-6½	6½-6½	6½-6½
30	6½-6½	6½-6½	6½-6½	6½-6½	28	..	..	6½-6½	6½	6½-6½	6½-6½	6½-6½	6½-6½
April 6	6½-6½	6½-6½	6½-6½	6½-6½	October 5	..	..	6½-6½	6½	6½-6½	6½-6½	6½-6½	6½-6½
13	6½-6½	6½-6½	6½-6½	6½-6½	12	..	..	6½-6½	6½	6½-6½	6½-6½	6½-6½	6½-6½
20	6½-6½	6½-6½	6½-6½	6½-6½	19	..	..	7	6½	6½-6½	6½-6½	6½-6½	6½-6½
27	6½-6½	6½-6½	6½-6½	6½-6½	26	..	..	7½	6½	6½-6½	6½-6½	6½-6½	6½-6½
May 4	6½-6½	6½-6½	6½-6½	6½-6½	Nov. 2	..	..	7½	6½	6½-6½	6½-6½	6½-6½	6½-6½
11	6½-6½	6½-6½	6½-6½	6½-6½	9	..	..	7½	6½	6½-6½	6½-6½	6½-6½	6½-6½
18	6½-6½	6½-6½	6½-6½	6½-6½	16	..	..	7½	6½	6½-6½	6½-6½	6½-6½	6½-6½
25	6½-6½	6½-6½	6½-6½	6½-6½	23	..	..	7½	6½	6½-6½	6½-6½	6½-6½	6½-6½
June 1	6½-6½	6½-6½	6½-6½	6½-6½	30	..	..	7½	6½	6½-6½	6½-6½	6½-6½	6½-6½
8	6½-6½	6½-6½	6½-6½	6½-6½	Dec. 7	..	..	7-7½	6½-6½	6½-6½	6½-6½	6½-6½	6½-6½
15	6½-6½	6½-6½	6½-6½	6½-6½	14	..	..	7½	6½	6½-6½	6½-6½	6½-6½	6½-6½
22	6½-6½	6½-6½	6½-6½	6½-6½	21	..	..	7½	6½	6½-6½	6½-6½	6½-6½	6½-6½
29	6½-6½	6½-6½	6½-6½	6½-6½	28	..	..	7½	6½	6½-6½	6½-6½	6½-6½	6½-6½

THE RETIREMENT OF SIR MARCUS SAMUEL.

A PIONEER OF THE PETROLEUM TRADE.

The announcement that Sir Marcus Samuel, Bart., has retired from the arena of commercial activity, will be received with a sense of regret by that large circle of numerous friends in both hemispheres who have long ago learned to recognise the importance of the great work which he has carried out in regard to the development of the petroleum industry.

The official intimation of the retirement of Sir Marcus is made in a circular issued a few days ago by Messrs. M. Samuel and Co., of Billiter Street, E.C., which reads as under:—

"Dear Sirs,—The partnership existing between Sir Marcus Samuel, Bart., and Mr. Samuel Samuel, trading under the style of M. Samuel and Co., having expired by effluxion of time, Sir Marcus Samuel has decided to retire from business, and will do so as from the 31st inst. The firm will be continued under the same style by Mr. Samuel Samuel, who has admitted to partnership Mr. Walter H. Samuel and Mr. Walter H. Levy."

It is a matter for congratulation that Sir Marcus Samuel has no intention of relinquishing the reins of office as chairman of the "Shell" Transport and Trading Co., yet, when the recent amalgamation with the Royal Dutch is recollected, it will be seen that the merging of those interests during the past year has, to a great extent, relieved the burden of responsibility from Sir Marcus; and consequently his retirement from the well-known firm of Messrs. M. Samuel and Co. suggests, to the thinking mind, that with the dawn of the New Year, a honoured pioneer of the petroleum trade, has laid aside almost all commercial bonds, preferring, after his life of remarkable activity and phenomenal success, that rest to which he is so justly entitled.

Sir Marcus Samuel has been fitly referred to as the father of the petroleum trade of the Far East. To have built up such an extensive business as that of the "Shell" Transport and Trading Co., with its gigantic fleet of fine oil tankers traversing the oceans, to have revolutionised the method of oil transportation, to have developed large petroleum fields, and lastly, but by no means least, to have been responsible for the

creation of a new fuel industry, is sufficient to perpetuate the name of any man, though this is but part of the great work which Sir Marcus has accomplished.

Of the pioneer work successfully carried through by Sir Marcus and which has been so instrumental in laying the foundations of that great and ever increasing petroleum trade with the Far East, it is impossible to speak in terms of due praise. The work, initiated and carried through amid difficulties of almost titanic proportions and the consequent remarkable success achieved, forms one of the most delightful pages in the history of

commerce. How rapid has been the progress of developments in the petroleum regions of the East and the importance which these have had upon the oil trade of this country, it is difficult indeed to estimate.

We have only to go back a few years to see the first great feat accomplished in the utilisation of oil fuel upon steamships, and yet to-day how enormous has that branch of the oil trade become! What position the motor industry would have been in to-day had it not been for Sir Marcus Samuel, one dares not for a moment imagine. It is not quite six years ago since the time when, in spite of the predictions of many people, that the policy was suicidal and alarmingly dangerous, that the



SIR MARCUS SAMUEL, BART.

"Murex" arrived in the Thames with the first cargo of petrol in bulk ever brought to this country. To-day no less than 75 per cent. of the motor spirit consumed in the United Kingdom comes from the prolific wells of Borneo and Sumatra, and without this immense supply the motor industry would long ago been unable to progress. Under the recent amalgamation of interests, the "Shell" Transport and Trading Co. benefits to the extent of 40 per cent., from the remarkable progress which the Dutch territories are making in the Far East, and when one recollects that but a few years ago the valuable motor fuel was all burned to waste under the stills in Borneo yet to-day is realising an enormous amount, the rise of the "Shell" Co., thanks to the indomitable perseverance of Sir Marcus

Samuel, forms one of the greatest romances ever associated with the oil business.

Liquid fuel has found no stronger supporter than Sir Marcus, for upon every possible occasion he has brought home its claims, and this with such success that the Admiralty has given its vote entirely in favour of the new fuel. Not many years ago, Sir Marcus Samuel persuaded the Admiralty to give liquid fuel a serious trial, and gave them repeated opportunities to test it, and, to use his own words, he has lived long enough to see its general adoption a *fait accompli*.

One of the distinguishing features of the career of Sir Marcus Samuel has been the fact that he has never hesitated to make a sacrifice in order to benefit others, and this we see in the recent arrangement which was made with the Royal Dutch Co. Until a few months ago, Sir Marcus and his brother held three-fifths of the entire capital of the "Shell" Transport and Trading Co. and it was in order to carry out the amalgamation with the Royal Dutch, and thus secure the interests of the shareholders for all time, that they sold £500,000 of their shares to the Royal Dutch at a value, which they knew was far below their intrinsic worth.

In connection with his great work for the petroleum industry, Sir Marcus has one great regret, and this is that our inconsiderate Government should have been so blind to its own interests as to shut the doors of India's petroleum producing lands to the "Shell" Co. Had the Government acted in anything like a fair and honest manner, we should, without a doubt, have seen the exploitation of the British Colonies for oil assuming immense proportions for the benefit of English enterprise and commerce, and though some years have elapsed since the "Shell" Co. was excluded from participating in the development of India's petroleum resources, the incident which brought this about will never be forgotten by Sir Marcus Samuel.

On an occasion such as this it is especially fitting that we should dwell at length upon the remarkable record which has been made by the firm of Messrs. M. Samuel and Co., from which important commercial house Sir Marcus Samuel has this week retired.

The original business of Messrs. M. Samuel and Co. was bequeathed to three brothers, the elder of whom many years ago seceded from it. From that time until the present day—that is nearly thirty years ago—the business has been carried on under the guidance of Sir Marcus Samuel, who, with his brother Samuel, was an equal partner in the firm.

It was while travelling in the East that the possibilities offered by Japan first became manifest to him, and so after conducting their business as merchants, having only agents in Japan, they realised that it was necessary to establish the firm there. The result was that Mr. Samuel Samuel went out to Yokohama in 1882 and there established the firm in the East. To-day, of course, the name is known throughout the world, and so, while not desiring to go deeply into the rise and continued success of it, we are sure it will prove very interesting reading if we here refer to some of the numerous matters which were carried through by

the firm, and which assisted so largely to place it in the very front rank of British commercial houses trading in the East. As soon as the firm was established in the East, great attention was paid to the trade in rice, and undeterred by the fact that Japan rice was reputed to be a Government monopoly, Messrs. Samuel and Co. greatly interested themselves in it, and gradually from a small trade, it became a very large one indeed. At that time, there was a very close shipping ring, and here, too, the firm saw the opportunity for tramp steamers to obtain a larger share in the homeward business, and some owners in whom they had established confidence entrusted them with the loading of their boats. To the surprise and dismay of all the shipowners and competing merchants, they succeeded in filling boat after boat, with the result that they established a connection among their friends which proved very lasting, while they also eventually made terms for them with the conference.

From the very first the firm were fortunate in obtaining a share of the Government business, and when Mr. W. F. Mitchell joined the Yokohama house, upon Mr. Samuel Samuel's retirement from the active management of the business in 1886, the prosperity of the firm increased by leaps and bounds.

It was in 1897 that they contracted with the Japanese Government for a loan of £4,500,000, the first five per cent. sterling loan which the Government had contracted, and this was subscribed ten times over before mid-day upon the date the lists were open. Messrs. Samuel were also responsible for inducing the Japanese into municipal finance, for they successfully issued for them the Yokohama Water Works, the Osaka Harbour Works, and the Yokohama Harbour Works, all of which were eagerly taken up by investors upon this side—a course which they have had no reason to regret. The firm also issued the first and only railway debenture loan ever issued in this country upon Japanese railways. This was an issue of £1,000,000 4½ per cent. bonds of the Kansai railway which they issued on behalf of the railway company. Since the issue the line has been bought by the Government, and it now forms part of the Imperial Government railways, yet the Government are unable to pay off the loan until maturity inasmuch as it was secured by a mortgage debenture upon the whole property of the line, registered in the name of the Law Debenture Corporation of London as trustees.

When the Japanese Government took Formosa, they made camphor a Government monopoly, and placed the marketing arrangements in the hands of M. Samuel and Co., and these arrangements have been carried out to for a period of eight years until the present day.

During the recent Japanese-Russian war, the firm again came prominently to the front, for on behalf of the Japanese authorities they carried out the import of vast quantities of fodder from Australia, these cargoes forming the first to enter the new harbour of Osaka. The firm also arranged the difficult task of transporting very large quantities of rice from Formosa to Japan, while they were also entrusted with the supply of army clothing and blankets, the orders for which were all

executed in Great Britain, to the entire satisfaction of the Japanese Government.

It was during the famine in Japan that Sir Marcus Samuel originated the import of Rangoon rice to Japan, upwards of 80,000 tons being shipped during that year from Burmah, this marking an entirely new departure. The wisdom in taking this step has since shewn itself for the trade has proved not only lasting but of great dimensions. Under the guidance of Sir Marcus Samuel the firm has very largely assisted in the development of the Japanese coal trade, which, during recent years has expanded to enormous proportions, for the bulk of the coal now consumed in the Far East is mined in Japan.

Of the export trade of the firm we need say but little. It covers almost every article of British manufacture, and the splendid reputation which they enjoy in Japan has long ago made the name of Samuel a household word throughout the Empire. It is a matter for congratulation to mention that Sir Marcus Samuel received the Knight Commandership of the Rising Sun, and Mr. Mitchell, upon his recent retirement, was made a Knight Commander of the Sacred Treasure, for the great services which the firm have repeatedly rendered the Japanese Government.

Although almost unlimited success has attended the present business transactions of the firm as lately constituted, the possibilities of entering into such vast undertakings were, as we have already mentioned, bequeathed to Sir Marcus Samuel and his brother by their father, who left them a good business, and what is still more valuable, a high reputation in the commercial world. No one can gainsay that this reputation has not been sustained and even increased by Sir Marcus and his co-partner, and now at the retirement of Sir Marcus Samuel, it is gratifying to note that his son, Mr. Walter H. Samuel, and also Mr. Walter H. Levy, have been admitted into partnership. To both these gentlemen we extend our congratulations, for we are quite confident that by the exercise of their energies, they will maintain that high position won so honourably by Sir Marcus Samuel, assisted by his brother, who remains a partner with them.

PRODUCTION OF ENGLISH COMPANIES IN RUSSIA.

BAKU RUSSIAN PETROLEUM CO., LTD.—The production for the week ended December 21st was 256,000 poods, or 4,127 tons; and for the week ended December 28th was 262,000 poods, or 4,224 tons.

RUSSIAN PETROLEUM AND LIQUID FUEL CO., LTD.—The production for the week ended December 22nd was 276,000 poods, or 4,450 tons; and for the week ended December 29th was 268,000 poods, or 4,321 tons.

SPIES PETROLEUM CO., LTD.—The output for the week ended December 22nd was 138,930 poods, or 2,241 tons; and for the week ended December 29th, 135,355 poods, or 2,183 tons.

THE EUROPEAN PETROLEUM CO., LTD.—The production for the week ended December 31st was 132,514 poods, or 2,136 tons; and for the week ended December 29th was 123,267 poods, or 1,937 tons.

THE DEVELOPMENT OF BRITISH OIL PRODUCTION.

A correspondent recently wrote to the Colonial Secretary upon the subject of the neglect of the opportunity to develop the petroleum-producing industry in the British Empire. It was pointed out that the British Empire ought to be the greatest producer of petroleum in the world, instead of which it only came fifth on the list, comparing very unfavourably with the production by the United States. The correspondent suggested that as the matter was one concerning the prosperity of our Colonies, the Government should take steps with a view to the development of the petroleum-producing industry in those of our possessions where the oil was known to lie in large quantities.

The following reply has been received from the Colonial Office:—

Downing Street, December 17th, 1907.

SIR,—I am directed by the Earl of Elgin to acknowledge the receipt of your letter of the 3rd inst. on the subject of the development of the production of petroleum in various parts of the British Empire. I am to inform you that this question has for some years been receiving the attention of His Majesty's Government; the Governments of the self-governing Dominions are actively exploring their oil-bearing areas; and, at the present time, the oil-bearing strata of the Island of Trinidad are being surveyed by a geologist, while in several other areas, especially in West Africa, important investigations are being carried on. I am to add that any further suggestions with regard to this matter which you may care to offer will be gladly received.—I am, sir, your obedient servant,

(Signed) H. BERTRAM COX.

LIQUID FUEL CONSUMPTION IN RUSSIA.

A NOTICEABLE DECLINE.

The recently-published official review of the Baku petroleum industry in 1906 contains the following highly-interesting figures shewing the decline of the use of liquid fuel in the principal manufacturing centres of Russia, in 1906, as compared to 1905:—

Name of Province.	Consumption of Liquid Fuel in poods.	
	1905.	1906.
Vladimir	12,464,300	9,004,400
Moscow	49,865,200	40,930,000
Nijni-Novgorod ..	10,142,000	5,620,000
Jaroslav	1,579,100	1,170,900
Tver	592,000	592,000
Smolensk	154,000	154,000
Tula	328,700	176,100
Riasan	2,351,900	1,614,200
Baltic Provinces ..	19,393,900	10,314,100
Total	96,871,100	69,575,700

Thus, there has taken place in 1906 a decrease in the consumption of liquid fuel by 27,295,400 poods, the place of which was taken by about 40,000,000 poods of solid fuel.

Another New Oil Tanker.—Messrs. Swan, Hunter and Wigham Richardson, of Newcastle, have, says the *Steamship*, received another order for the construction of an oil tanker.

THE REGATUL ROMAN COMPANY.

A SATISFACTORY BALANCE SHEET.

We have received the accounts of the Regatul Roman Co. of Roumania for the financial year ended 30th June, 1907. The balance sheet shews the following principal assets:—Lands and buildings, 15,664,485 francs; wells, 2,929,817 francs; machinery and materials, 2,979,513 francs; sundry installations, 595,621 francs; and sundry articles, 293,465 francs. The foregoing items together amounting to 22,462,902 francs represent the assets taken over by the company upon its formation. Cash at banks and in hand, 495,442 francs; sundry debtors, 1,585,566 francs; stock of materials, 3,261,941 francs; and stock of crude oil, 172,533 francs.

The liabilities include:—Share capital, 24,000,000 francs; amortisation on assets originally taken over, 1,836,550 francs; and sundry creditors, 1,324,862 francs.

The profit and loss account shews the following expenditure during the year:—General expenses, 565,852 francs; cost of exploitation, 801,420 francs; upkeep of machinery, plant, roads, etc., 444,253 francs; upkeep of buildings, stables, etc., 212,086 francs; and royalties, 737,083 francs. The receipts include:—Sales of crude oil, 5,791,823 francs; interest, 183,831 francs; sundry receipts, 398 francs; total, 5,976,054 francs. The accounts shew a gross profit for the year of 3,040,530 francs, out of which 1,897,900 francs is to be written off for depreciation. Adding to this the balance of 36,348 francs carried forward from the preceding year, we get a total net profit at the disposal of the shareholders of 1,178,978 francs.

The report and accounts were submitted to the shareholders at an ordinary general meeting, held at Bucarest on Thursday last.

THE DECISION OF THE GLOUCHKOFF PLOT AT GROSNY.

An important item of news comes from Grosny in the announcement of the official decision to lease out by auction the tract of 270 acres of petroliferous land which formed the now cancelled Glouchkoff concession. The full details of the terms on which this land is to be leased are still unknown, but it is understood that the tract is to be parcelled out into ten lots. The terms for the five northern plots will be much easier than for five southern ones, both in the obligatory minimum production, obligatory number of wells to be drilled, and the minimum rate of royalty at which the bidding is to start. The decision to divide the land into two zones, the northern and southern, came as a surprise to local people. In the manner adopted the plots will be cut up parallel with the direction of the oil strata, and will produce as a result five plots, the northern ones, which, in the opinion of people of local experience, will be quite worthless for oil production. The more practical way, they say, would have been to cut the plots up in a manner that each one should have a southern half for drilling purposes, and a northern half for buildings and storage accommodation. In their decision the war

office, who rule the province through the local cossack administration, were guided by the old official view of the extent and direction of the Grosny oil zone, ignoring the results of subsequent geological investigations.

There are reports current that, properly speaking, there will be no auctions, but that the five good plots will be handed over to the local leading firms who have already applied for them.

During the last two months increased drilling activity has prevailed at Grosny, more especially in the western part of the field, where the Spies Co. is drilling on three fresh plots, Nos. 24, 32a and 32b. The Tcheleken-Daghestan Co. is preparing to drill on plot No. 49, the Russian Standard is drilling three wells on plot No. 36, and the Caspian and Black Sea Society is drilling a similar number on plots Nos. 26 and 31.

THE SPOUTER AT SURAKHANY.

INTERESTING DETAILS.

The latest issue of the *Neftiannoie Dielo* contains full details concerning the spouter which recently became active at Surakhany, near Baku. The spouter is situated on the plot of the Baku Naphtha Co. at Surakhany, and on November 27th it began to spout, throwing out a large quantity of light crude oil. The jet of oil broken up by the force of the gases which accompanied it rose far above the derrick, and fell on the adjoining structures and machinery. The spouter having come as a complete surprise, there was at first absolutely no provision for controlling it, and a shield was put on it only some time afterwards. The roar was heard throughout Surakhany, and was unlike that of other spouters, less rich in gas, as there was not so much of that bubbling noise in it. Over the top of the derrick there was floating a haze from the light vapours of the light oil, which gave it the appearance of being on fire. The oil and sand mixed together flowed down in a mass, broke the stone wall surrounding the plot, and covered the adjoining fields. The spouter increased in force, as it continued to flow until, on the sixth day, December 3rd, the well got corked up, and the flow stopped. A large part of the oil thrown out was lost by absorption in the ground, but about 200,000 poods was pumped over to the gas installation and collected in tanks, and then pumped again through the gas pipe line to Balakhany.

The well is 1,589 feet deep. It was started with a 24-inch diameter, and finished at 6 inches. The oil is heavier than ordinary Surakhany crude, which as a rule is only .776—.785. This oil nevertheless is also very light, specific gravity 0.820—0.830, or an average of 0.825. It is of a dirty reddish brown colour, mixed with water. It yields more than 60 per cent. illuminating oil, but little benzine or solar oil, and about 20 per cent. residuals.

Work is now proceeding actively in restoring the derrick and clearing the borehole. It is said that the spouter came at the moment when it had been decided to abandon the well and generally restrict operations in this field.

The Subscription List will open on Monday, 6th Jan., and close on Friday the 10th inst. for London, and Saturday the 11th for the Country. The Full Prospectus of which this is an abridgement has been filed with the Registrar of Joint Stock Companies, and applications for Debentures will only be received upon the terms of such Full Prospectus.

The Commonwealth Oil Corporation, Limited.

(Registered under the Companies Acts, 1862 to 1900.)

SHARE CAPITAL - - - £800,000.

Divided into 500,000 Preferred Ordinary Shares of £1 each, all of which have been issued and are paid up to 18s. and 300,000 Deferred Ordinary Shares of £1 each, of which 225,007 have been issued and fully paid up or credited as such.

ISSUE OF £150,000 5½ PER CENT. FIRST MORTGAGE DEBENTURES IN AMOUNTS OF £50 OR MULTIPLES OF £50.

PAYABLE AS FOLLOWS:

On Application	£5	On the 1st day of July, 1908	£10
On Allotment	£5	On the 30th day of September, 1908	£10
On the 31st day of March, 1908	£10	On the 1st day of January, 1909	£10

(In respect of each £50 applied for).

Directors:

SIR GEORGE NEWNES, BART., M.P., 24, Carlton House Terrace, S.W. (Chairman).
 SIR WILLIAM B. AVERY, BART., Oakley Court, Windsor.
 R. LEICESTER HARMSWORTH, Esq., M.P., Caxton House, Westminster, London, S.W.
 D. ELLIOTT ALVES, Esq., The Braes, Tunbridge Wells.
 WILLIAM BLYTH, Esq., 8, Great Winchester Street, London, E.C.

Consulting Engineer and General Manager:

DAVID ALEXANDER SUTHERLAND, F.I.C., 26, Victoria Street, London, S.W.; Equitable Building, Sydney, New South Wales.

Bankers: BANK OF NEW SOUTH WALES, 64, Old Broad Street, London; and Sydney,

Solicitors: MESSRS. LIGHT & FULTON, 1, Laurence Pountney Hill, London, E.C.

Brokers: MESSRS. STEPHEN C. CORK & SON, 30, Throgmorton Street, London, E.C.

Auditors: MESSRS. JOSOLYNE, MILES & BLOW, 28, King Street, Cheapside, London, E.C., Manchester and Paris.

Secretary and Offices: CHARLES F. JONES, 26, Victoria Street, London, S.W.

Subscriptions are invited for £150,000 in 5½ per cent. First Mortgage Debentures.

The issue will be in the form of Registered Debentures in amounts of £50 or multiples of £50, and will be a floating charge upon the entire undertaking and assets of the Corporation (including uncalled capital). They will be repayable at par on the 1st day of January, 1918, but the Corporation reserves the right to redeem the whole or any part thereof by purchasing Debentures in the open market or by repayment at a premium of £5 per cent. at any time after the 1st day of January, 1911, on six months' notice.

Interest at the rate of 5½ per cent. per annum will be paid on the moneys for the time being paid up on the Debentures until the final instalment is paid. As from the date of payment of the last instalment, Debenture-holders will be entitled to interest at the rate aforesaid (calculated from such date) on the nominal value of the Debentures held by them. Such interest will be payable half-yearly on the 1st July and 1st January in each year, the first payment (calculated as aforesaid) being made on the half-yearly date next following the date of payment of such last instalment.

The Directors and their friends have agreed to take up half the said issue if not otherwise subscribed.

Provisional Certificates will be issued on payment of the amount due on allotment and exchanged for Debentures on payment of the final instalment.

Instalments may be paid in advance, on allotment, or on any of the prescribed dates for payment, and interest will be allowed upon all payments in advance at the rate of £5½ per cent. per annum. If a smaller allotment is made than is applied for, the deposit will be applied in or towards payment of the amount due on allotment, and if no allotment should be made the deposit will be returned in full.

The allotment of Debentures will carry with it the right at any time up to the 30th June, 1909, to call for the allotment at £2 per share of 25 Deferred Ordinary Shares of £1 each for each £50 Debenture held, so that if the Deferred Ordinary Shares stand at a higher price than £2, the Debenture holder will have the opportunity of acquiring them at this price without being under any compulsion to take them. These Deferred Shares stand at a substantial premium, and before the present financial depression were largely dealt in at upwards of £3 per share.

A brokerage of 10s. per cent. will be paid to Brokers in respect of applications accepted on forms bearing their names.

An application will be made in due course to the Stock Exchange for a settlement in and an official quotation of the Debentures.

The Company has issued the following shares as fully paid up and for a consideration other than cash, viz.:—225,000 Deferred Ordinary Shares of £1 each in part consideration for the purchase of the properties acquired by the Company under the Agreement mentioned in Clause III. of the Articles of Association of the Company.

The following material contracts have been entered into by the Company within the last two years, in addition to agreements in the ordinary course of business.

30th March, 1906.—The New South Wales Shale and Oil Company, Limited, and The Commonwealth Oil Corporation, Limited.
 9th October, 1906.—The Commonwealth Oil Corporation, Limited, and Kelso King and George Montague Merivale.
 10th January, 1907.—The Commonwealth Oil Corporation, Limited, The New South Wales Shale and Oil Company, Limited, and the Australian Gaslight Company.

Copies of the Memorandum and Articles of Association of the Corporation and the form of Debenture, the Agreements referred to, and the last printed Balance Sheet can be seen at the registered office of the Corporation, 26, Victoria Street, Westminster, while the lists remain open.

The Company was incorporated on the 8th day of December, 1905, for the purposes of acquiring extensive Shale Properties at Wolgan and Capertee in the State of New South Wales, and of manufacturing, refining, and dealing in shale, oil, and other products to be made therefrom.

Since the formation of the Company opportunities have arisen for further profitably developing the resources of the undertaking in directions specified in the full prospectus which were not originally anticipated, involving an expenditure, incurred and estimated; of £150,000.

Amongst the assets and properties of the Corporation are—

(1) Upwards of 30 square miles of shale and coal fields situated at Wolgan and Capertee, and held under Government leases.

(2) Power, electric lighting and mining plant, works and town site, dwelling-houses, offices at Wolgan.

(3) The coal mines and coke ovens.

(4) The railway of the Corporation connecting the before-mentioned properties with the Government system of railways now working.

(5) The railway plant, rolling stock, and buildings.

(6) The undertaking formerly carried on by the New South Wales Shale and Oil Company, Limited.

(7) The new crude oil plant and other plant and machinery at Torbane.

(8) 130 acres of freehold land at Parramatta, near Sydney.

The following is the Report of Mr. D. A. SUTHERLAND, the Consulting Engineer of the Corporation:—

"1. Having regard (a) to the very satisfactory development of the Wolgan-Capertee shale fields, and the proving of enormous deposits of shale in greater thickness and richer quality than my earlier investigations warranted me in anticipating; (b) to the successful construction of the railway connecting the properties, formerly without means of communication, with the main land to the seaboard; (c) to the discovery of deposits of coal of good coking quality, the existence of which, when the properties were purchased by the Company was unsuspected, I have no hesitation in stating that in my opinion the value of these properties has very largely appreciated, and is far greater than the sum at which they stand in the Company's books, whether such value is taken upon the basis of royalty or acreage.

"2. Since the formation of the Company the original area of the shale and coal fields has been greatly increased.

"3. I estimate the shale proven at 20,000,000 tons, and that presumable at not less than a further 30,000,000 tons.

"4. Though the coal field has not been prospected or developed to the same extent as the shale field, the results found by shafts and adits indicate that the coal lies as regularly as the shale.

"5. The properties and works of the New South Wales Shale and Oil Company purchased last year have been much enhanced in value by the development and improvements, and represent a much larger amount than that standing in the books.

"6. The plant, buildings, machinery, with freehold land since purchased, and other realisable assets not already mentioned, are now greatly in excess of the amount shown in the Balance Sheet of 30th June, 1907.

"I have, therefore, no hesitation in stating that the assets are of the most ample character, and that their value is far in excess of the proposed Debenture issue. "D. A. SUTHERLAND.

"26, VICTORIA STREET, S.W.

"31st, December, 1907."

The following figures, extracted from the Balance Sheet of the Company made up to the 30th June, 1907, and presented to the Shareholders at the recent Annual General Meeting, show the amount (at cost) at which the properties and assets of the Company stand in the Books of the Company as at that date.

	£	s.	d.	£	s.	d.
Properties, etc., at Cost ..	300,000	0	0			
Freehold Land, Leases, Roads, and Maintenance ..	18,885	2	3	318,885	2	3
Railway Construction ..	82,755	12	8			
Railway Rolling Stock, Buildings, Loose Plant, etc. ..	11,544	1	11	94,299	14	7
Plant, Machinery, Buildings, Fittings, Furniture, Horses, etc.				38,335	0	0
Development, Prospecting, and Surveying ..				35,484	17	6
Purchase Price of New South Wales Shale and Oil Company	42,000	0	0			
Advances on account of Current Expenses and New Capital Expenditure ..	26,108	1	10	68,108	1	10

Further sums amounting to £100,000 have been since called up, which with the remaining call of 2s. per share have been or will be applied for the general purposes of the Company and the development of the resources of its undertaking. The proceeds of the present Debenture issue, subject to the expenses in connection therewith, will also be available for the same purpose.

The Directors desire to point out that the New South Wales Shale and Oil Undertaking is at present earning substantial profits, and that other large sources of income are approaching realisation now that the Railway is in working order.

Prospectus and forms of application can be obtained from the Bankers, Solicitors, Brokers, Auditors, or from the Secretary of the Company.
 LONDON, 2nd January, 1908.

LATEST QUOTATIONS OF PETROLEUM SHARES.

ENGLISH COMPANIES.

This list is restricted to companies who have paid dividends or who are producers.

Company.	Capital Paid Up.	Value of Shares.	Latest Prices.
Assam Oil	£205,000	£1	1-5
Baku Russian Petroleum ..	£750,000 Ord.	£1	2/0-2/6
..	£650,000 5½% Pref.	£1	4/0-4/6
Bibi-Eybat "Petroleum" Co. ..	..	..	7/0-8/0
Californian Oilfields ..	£250,000 Ord.	£1	51½-51½
Commonwealth Oil Co. Pref	18/- paid up (Prem.)	16-16pm	11½-11½
..	Def.. £1 fully paid	11½-11½	11½-11½
European Petroleum ..	£550,000 Pref.	£1	1/0-2/0
..	£550,000 Ord.	£1	0/6-1/6
..	£376,000 Deb.	£100	70-74
Russian Pet. & Liquid Fuel ..	£500,000 6½% Pref.	£1	3/6-4/6
..	£600,000 Ord.	£1	3/0-4/0
Schibaieff Petroleum ..	£575,000 6% Pref.	£5	1½-1½
..	£575,000 Ord.	£1	3/0-4/0
Shell "Transport" & Trading ..	£2,000,000	£1 xd	42/6-43/6
Spies Petroleum Company ..	£1,000,000 Pref.	£10	9½-9½
..	£312,500	10s.	6/6-7/0

RUSSIAN COMPANIES.

Company	Nom. Value in Roubles.	Quotations on Dec. 30th.	
		Lowest Roubles.	Highest Roubles.
Baku Naphtha Co.	100	578	581
Balakhany Naphtha Co. ..	250	—	—
Caspian Society	1,000	4,375	4,400
Mazout Co.	250	400	—
Melikoff, A. C.	250	—	—
Mirzoeff Bros.	250	—	—
Naphtha Co. "Kavkas" ..	250	—	—
Naphtha Trading Co., A. I. Manta-	..	..	..
cheff & Co.	250	158	160
Neft Co.	250	—	—
Nobel Bros.	5,000	10,725	10,825
.. ..	250	—	—
Rops and Co. V... ..	250	—	—
Russian Naphtha Co. ..	250	—	—
Society Mazout	250	—	—
Ter-Akopoff Co.	250	—	—
Tumaieff & Co., J. G. ..	250	—	—
Volga-Caspian Naphtha and Trading	..	..	..
Co.	250	—	—
.. .. (Second Issue)	250	—	—

SCOTCH COMPANIES

Supplied by Messrs. MACLEAN AND HENDERSON, STIRLING.

Company.	Capital Paid Up.	Value of Share.	Latest Prices.
Broxburn Oil Co., Ltd., Ord. 17/- pd	£235,000	£1	£1 16s. od.
Do. 6% Cum. Pref. ..	£100,000	£10	£11 18s. 9d.
Burmah Oil, Ord.	£1,100,000	£1	£3 4s. od.
Do. Pref.	£250,000	£1	£1 5s. od.
Dalmeny Oil Co., Ord. (7 paid) ..	£37,800	£8 10s.	£6 os. od.
Do. 5% Pref.	£18,900	£7	£4 13s. od.
Oakbank Oil Co., Ltd, Ord.	£170,000	£1	£1 15s. od.
.. (17s. paid)	..	..	..
Pumpherstons Min. Oil Co., Ltd., Ord.	£110,500	17s.	£13 2s. 6d.
.. (17s. paid)	..	..	..
Do. 6% Cum. Pref.	£100,000	£10	£13 5s. od.
Tarbrax Oil Co., Ltd. Ord. (£1 pd.)	£38,350	£1	£2 15s. 6d.
Do. 6% Cum. Pref.	£35,000	£1	£1 3s. od.
Young's Paraffin Co., Ltd., Ord. ..	£452,808	£4	£3 5s. 3d.
Do. "B" Deb. ...	£150,000	£100	£155.

DUTCH COMPANIES.

Company.	Latest Quotations (per cent.)	Florins.
Arnhemsche Petroleum Mij. ..	45	1,000
Aurora .. (Deb. 5%) ..	85	—
Campina Poiana Mij. ..	—	—
Dordtsche Petroleum Mij. (Pref.) ..	125	50
.. .. (Deb. 4½%) ..	100½	1,000
Gaboos	17½	—
Holl. Rumeensche Petroleum Mij. ..	18	1,000
Int. Rum. Pet. Mij. ..	85	500
Java Petroleum Mij. (Ord.) ..	—	1,000
.. (Pref.) ..	19½	—
Koninklyke Nederl. Pet. Mij. Shares ..	275	250-1,000
.. Share certificates ..	269½	1,000
Mœara Enim Petroleum Mij. ..	129½	100
.. 1-1,000 Oblig. 5 ..	—	250-1,000
"Moesi Ilir" Petroleum Mij. ..	—	—
Nederl.-Rumeensche Petroleum Mij. ..	3½	—
Nieuwe Ned. Petroleum Mij. And. ..	—	1,000
Oliebronnen in Hannover Mij. ..	38	—
.. (Deb. 5%) ..	80	—
Panolan Maatschappij Cert. ..	250	—
Perlak Petrol. Mij. (6% cum. pr. A.) ..	123½	1,000
.. (Common) ..	—	—
Sumatra-Palembang Petroleum Mij ..	88½	500
Tarakan Petrol Mij. ..	30	—
Zuid Perlak Petrol. Mij. (Pref.) ..	86½	—

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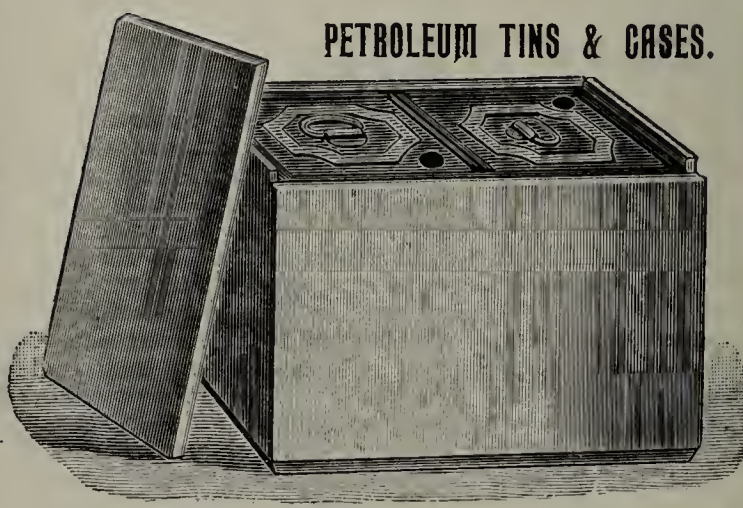
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THE PETROLEUM REVIEW,

45, St. Mary Axe, LONDON, E.C.

American Office: 150, Nassau Street, New York.

The ANNUAL SUBSCRIPTION for English and Foreign readers is 26s., including Postage Single Copies, 1s.

Telephone—12970 Central.

SATURDAY, JANUARY 4, 1908.

LUCK OR FORESIGHT?

IT has been reiterated almost times without number at the various meetings of the Anglo-Russian petroleum companies that there is no business under the sun so full of risks and uncertainties as is the petroleum industry, and so frequently has this statement been thrust down the throats of the hungry shareholders, that there are, I believe, some who would seriously argue that success in oil enterprises depends mainly if not solely upon luck. Yet the vast majority of people—in fact, everyone who is acquainted with the actual position of the petroleum industry—naturally cannot believe such statements. To the few who maybe have not yet learnt to take such assertions *cum grano salis*, and who, to-day, place some reliance in this favourite excuse of the gentlemen in charge of our Anglo-Russian oil companies, I would urge the careful perusal of the two lengthy articles which appear in this issue of the REVIEW—one dealing with the history of the Standard Oil Co., of New York, and written by the Vice-President of the Company, and the other article detailing many of the circumstances which have just led to the retirement of Sir Marcus Samuel, Bart., from the honoured position which he has held for so many years in connection with the firm of

Messrs. M. Samuel and Co. These two articles shew, beyond the shadow of a doubt, that success is achieved not by luck, but by that more substantial factor, foresight and perseverance.

With regard to the history of the Standard Oil Company, the letter by Mr. Archbold is so lucid and so explanatory that I think it does not require any comment from myself here, but if I would make reference to one matter in connection with the writer, it is that when I had the pleasure of meeting him at the Company's Office, at 26, Broadway, New York, some eight years ago, I was greatly impressed with the great devotion displayed and the amount of labour introduced by him into the affairs of the Company. But this unmistakable energy and devotion to one's labours is not only noticeable in the career of the officials of the great organisation, for the most humble employe has also learned the wisdom of throwing his whole heart and soul into his work. One hard and fast rule of the Standard Oil Company is that neither its officials nor its employes shall have their interest divided, and with this end in view, it is laid down that they have no right to interest themselves in any other business. Thus it is seen that this true energy which permeates the whole of the organisation of the Standard is to be found in the most humble as well as the highest servant of the Company, and who dares to say that this simple business principle has not, in itself, been of some great assistance in achieving success at some time or other?

In the case of Sir Marcus Samuel, too, we have an excellent example of the success which is in store for those who exercise patient and continuous perseverance and careful foresight in all business matters. The career of Sir Marcus Samuel has been wrapt up in the business of the well-known house of Messrs. M. Samuel and Co., yet during late years, petroleum matters have taken up a considerable part of time, for was it not from his tact and foresight that the now gigantic business of the "Shell" Transport and Trading Co. was evolved? It must be eighteen years ago since Sir Marcus Samuel first commenced to deal in petroleum products, and in his initial efforts in this direction, many difficulties were swept away by reason of the fact that for general goods he had a large connection among merchants. My personal association with Sir Marcus dates back from 1891, when I recollect, he visited the storage wharves of the Kerosene and Tank Storage Companies, at Purfleet, where I was conducting experiments on behalf of both these companies. It was during lunch one day that Sir Marcus put to me a number of questions with regard to the methods adopted in Russia for the storing, shipping and the transport of oil on land and sea, and to me it was soon apparent by the manner in which the questions were put, that, without doubt, he possessed a master mind. It was shortly after this that we saw the first attempt put forward by Sir Marcus, of carrying oil to the far East in bulk *via* the Suez Canal. The experiment at that time created quite a sensation in the world of petroleum, for prior to this the transport had been carried on in cases.

Steps were soon taken to move the Suez Canal

authorities to prevent the passage of bulk oil boats through the canal, but thanks to the intervention of the English Government, Sir Marcus Samuel carried his point, for which successful endeavour the whole petroleum industry owes him an undischargable debt of gratitude, for the pluck and energy with which he defended his first steps were in every way most exemplary.

Then, again, in the carrying of oil in bulk to the East, another obstacle was encountered and triumphally overcome by Sir Marcus. The Suez Canal dues were so high that competitors in the oil business ridiculed the idea of carrying oil on the outward journey and then having to return in water ballast. By his usual foresight, Sir Marcus hit upon the idea of utilising the tank steamers for general cargoes, and this at most remunerative rates. How successful the adoption of this principal of carrying oil in bulk has been, can be seen from the fact that within five or six years of the inception of the idea, some thirty-eight tank steamers belonging to the Company were engaged in regular voyages between European ports and the East.

It is perhaps not generally known that to Sir Marcus Samuel must go the credit for the general adoption of oil tankers of larger size. At the time of which I write a tanker of about 6,000 tons capacity was considered the limit of size, but thanks to efforts put forward by Sir Marcus and his advisers, the size of such bulk-carrying vessels has greatly increased until now a ten-thousand ton tanker is quite a common thing at our large storage depôts, while as we now know, steamers of even larger size for oil-carrying purposes are already on the ocean.

Having at his disposal a fleet of such large carrying capacity, Sir Marcus felt that it was a dangerous policy to be dependent upon his oil cargoes from Russian sources only, and so while in search of oil producing land, his attention was directed to the prolific fields of Borneo, then scarcely known in the world of oil. A sample of the oil from the territories was brought to Sir Marcus, and I had the pleasure of testing this, and advising as to its possibilities. The development of these fields and the result achieved by Sir Marcus in having secured them, is one of the most romantic pages in the history of petroleum developments.

What I have already said unmistakably shows—and I have given two examples of it—how great a success it is possible to achieve where skill and foresight are brought to bear. Those who talk about luck in the petroleum business are exactly those persons who need it as their chief asset, and had only a little foresight and business ability been displayed in many of the companies at present operating in the petroleum fields, I am confident they would have no need to be dependent upon that uncertain and flimsy substance—luck.

P. DVORKOVITZ.

Excitement in Texas.—A small town in Texas—Bells—is at present the centre of excitement over the reported strike of oil, and it is now attracting drillers from the Beaumont and Oklahoma fields. The news of the successful completion of the well, it is said was closely guarded, until the majority of the available territory was secured upon advantageous terms.

THE REFINING OF CALIFORNIAN CRUDE OIL.

By MR. J. C. CHRISTENSEN, B.Sc.

Oil refining has been carried on in California since 1856, yet it is only within the last ten years that the industry has shewn any marked increase, probably owing to the impossibility of producing a kerosene of good quality heretofore. Since kerosene constitutes about thirty per cent. of the crude oil, it will readily be seen how important it is to properly refine this portion, not only to make the best profit on the operation, but in order that this portion may be disposed of at all; for the low fire test would preclude its use as fuel, and only limited quantities could be sold as gas engine distillate.

It was only with the publication of the Price patents in 1895, and the Starke patents in 1898 (now controlled by the Standard Oil Co.) that a successful method of purifying kerosene distillate became known to the public. Had it not been for the discovery of a successful method of refining kerosene, the author believes that the Standard Oil Co. would never have entered the California field as refiners. Previous to Starke's discovery, California kerosene was refined as well as possible and mixed with Eastern oil to make the cheaper grades of illuminants.

In selecting an oil for the production of a complete line of products, the crude should be of the lightest gravity obtainable; and the distillate obtained therefrom should not contain more than one half per cent. sulphur (in the kerosene portion); it should not lose more than thirty per cent. of volume in the process of refining, and when refined should burn satisfactorily in any lamp. (The "Royal" and the old style "B. & H." lamps, especially the mammoth sizes, are the ones commonly used for this test.) Cheap and improperly refined oils will not burn in the mammoth sizes of these lamps unless the flame spreader—the cap fitting on the top of the central draught tube—is cut off so that it is brought nearer the wick. Even then the oil will emit pungent vapors that effect the eyes. In the smaller lamps the cheaper oils burn more or less satisfactorily, but always with some odor. A properly refined oil will burn in any lamp with a full clear flame without any appreciable odor; and the author has been unable to detect any marked difference between the burning qualities of the best California oil and Eastern oil.

For the production of asphalt exclusively, oil of the heaviest gravity is desirable, and in practice oil over 16° B. is not used. Consequently oil of from 16° to 20° B. is not generally used for refining, but only for fuel.

With reference to the refining operations, two methods of distillation are in common use so called "continuous" distillation and "non-continuous" distillation. Since the latter is more easily understood it will be described first. The crude oil, 22° B. or over, is pumped into a still, a cylindrical iron vessel which, in addition to the usual accessories of a boiler, is provided with perforated steam pipes laid inside and close to the bottom of the still which may or may not have a dephlegmator (only

two refineries on the coast have dephlegmators on the stills) and heat applied. As the oil heats, the water which is always found in the crude, partially separates and is drawn off from beneath the oil. The light oil, called naphtha, distills off first and is usually run into a tank provided for it until the gravity of the distillate coming from the condenser is 54° B., when the distillate is directed into the engine distillate tank. As the gravity of the distillate approaches 55° B., the still gets the "rattles," due to the sudden formation and condensation of steam within the oil, and water begins to come over with the oil. The still must be carefully fired until the water is all "off," to prevent the crude oil from being carried into the condenser in the form of a foam. This foaming over is technically known as "puking." When water ceases to come off, steam—either direct from the boiler or superheated—is introduced at the bottom of the still by means of the perforated pipes before mentioned, in such quantity that the condensed liquids are in the proportion of one of water to twenty of oil. The steam serves to carry over the heavy oil vapours, thus preventing cracking and also to partly desulphurise the oil. California oils cannot be profitably cracked, in fact, great care is taken to prevent cracking, as less acid refining is then necessary.

When the distillate entering the second tank—the engine distillate tank—is 48° or 47° B. according to the practice in the refinery, the stream of oil is directed into the kerosene distillate tank. When the distillate attains a gravity of from 34° to 38° B. according to the grade of oil to be made or when the gravity of the oil in this tank is from 36° to 40° B. the stream is turned into a fourth tank until the gravity of the oil entering it is 25° B. This fourth tank contains the "gas oil" or "stove oil," which is used for making oil gas or for fuel. The fraction from 25° B. to about 12° B. is collected in a fifth tank, and is used for making lubricating oils. Much steam (up to 50%) is used while the lubricants are distilling, and the distillation is stopped when the residue in the still is of the consistency of hot asphalt, *i. e.*: when a small portion drawn off and cooled can be chewed like gum it should not stick to the teeth or become string. The residue in the still—asphalt—is drawn off into a closed vessel and allowed to cool. The still, after cooling somewhat, is re-charged. During the drawing off of the asphalt and the re-filling of the hot still both still and cooler are kept filled with steam to exclude air and thus prevent fire. To the best of the authors knowledge, no refinery on the coast uses a vacuum in connection with the distilling of lubricating oils, and few refineries use superheated steam—two devices which no modern refinery should neglect. Pressure in the still should in all cases be avoided, not only on account of the danger, but also because cracking takes place much more readily under pressure.

In continuous distillation five stills usually comprise a

battery, though some refineries have only three, while others have ten or more. The oil runs continuously into the first still, flows by gravity through the battery, and the residuum runs continually from the bottom of the last still, through pipes cooled by water, into the fuel tanks. The first still merely serves to heat the oil and to separate the water therefrom. The gravity of the distillate coming from the second still is maintained at about 58° B, and consequently contains the naphtha. The gravities of the distillates from the third, fourth and fifth stills are 45°, 36° and 31° B respectively, and all the distillate is run into the same tank to make the "coal oil stock." The gravities—excepting that from the last still—are of little importance, the stills being fired so that each evaporates about the same amount of oil. The residue from the last still is from 14° to 18° B, and is sold for fuel. No gas, stove, or lubricating oils are made by continuous distillation. "Bottom" steam is used in the last three stills.

While large quantities of oil can be cheaply handled in continuous stills, it is the author's opinion that the best results cannot be attained by their use, unless there are at least ten stills in a battery, owing to the cracking which must inevitably take place in the passage of the oil from one still to the next some 75° or 100° Fahrenheit hotter.

The distillate from some oils, notably those from Santa Maria district, distilling below 32° B, tends to form an emulsion with the steam used in distilling, so that it is necessary to use very hot water to cool the condenser, for water separates more readily from the hot oil. Sometimes even this fails, and it is then necessary to treat the emulsion with acid, or to re-distill it.

The Refined Oils.

Gasoline and Benzine: That fraction of the oil called naphtha is run into the "steam still"—a still like the still heretofore mentioned, except that the vapor pipe is very high (15 to 30 ft.), and is usually filled nearly to the top with large pieces of quartz. This still is not heated by fire, but by means of steam introduced through the perforated pipe lying on the bottom of the still. The more volatile oils evaporate and pass through the column of quartz to the condenser, while the less volatile portions condense in the column and fall back into the still. Thus, the column acts not only as a fractional condenser, but also as a scrubber; the vapor being forced to bubble up through the descending liquid and being thoroughly washed thereby. The oils run from the condenser into different tanks, according to the quality of the products required. Usually gasolines of 70° and 65° B are made, and benzines of 58°, 54° or 52° B. The steam used in the distillation removes much of the sulphur contained in these oils, and they are therefore often sold without further treatment; but when it is desired to produce "deodorized" gasoline or benzine the products are given a final treatment in an agitator with either ordinary or fuming sulphuric acid, washed with water to remove most of the acid, and finally with

water until free from lye. Some refiners treat all the naphtha with acid before distilling it in the steam still. The quality of California gasoline is much superior to eastern gasoline of the same gravity, in that it evaporates at a much lower temperature.

The heavier oil, called "still bottom," which remains in the still after the gasoline and benzine have been separated, may or may not be treated with acid as described above, and is sold as "engine distillate," of which there are two grades on the market: No. 1 is about 52° B, and nearly or quite water white. No. 2 is about 49° B, and usually more or less yellow in color. The still bottom may also be added to the coal oil distillate.

Kerosene.

Starke's process:—The kerosene stock obtained as above is heated either in a still or agitator to a temperature of from 180° to 250° Fahr., and a small quantity of strong sulphuric acid (66° B.) is slowly added, the oil being gently agitated meanwhile. When the addition of the acid is stopped, the agitation is increased somewhat and continued for from one-half to three-fourths of an hour. The acid combines with the impurities in the oil to form a black viscous liquid resembling coal tar, and is called "sludge." A few minutes after the agitation has been stopped the sludge is drawn off from beneath the oil, from which it readily separates on account of its greater density. The treatment is then repeated from three to six times, using fuming sulphuric acid instead of the ordinary 66° B. acid. The oil is then washed with lye and water as described in the treatment of benzine. The oil is now from 1° to 3° B. lighter in gravity, is usually of a greenish yellow colour, and will burn in any lamp. In order to make the oil water white, and to secure the desired flash test, it is distilled again, using bottom steam, a small fraction being run into engine distillate if the flash test had previously been too low. The distillation is stopped when the distillate commences to shew a yellow colour—at about 31° B.—or when the gravity of the oil in the tank is from 43° to 39° B. The cold distillate is then treated with a small quantity of sulphuric acid to improve the colour and odour, washed with lye and water until perfectly neutral, and allowed to stand until free from water, when it is ready for market.

Another method in general use is the so-called "Canadian Treatment," which involves agitating the oil with a very strong solution of caustic soda (30° B.) in which litharge has been dissolved—practically a solution of sodium plumbite—previous to the treatment in the cold, with either ordinary or fuming sulphuric acid. By keeping the oil cool while treating with acid, a good colour is obtained without re-distilling. The sodium plumbite is supposed to remove the sulphur from the oil; but, as a matter of fact, very little sulphur is removed by it and its use might just as well be abandoned and oils refined in this manner are of inferior quality.

(To be concluded.)

NOTES FROM ALL QUARTERS.

RUSSIA.

The Neft Company's Spouter.—The spouter of the Neft Co. stopped flowing on December 27th.

Astrachan Residual Stocks.—The total stock of residuals left to winter at Astrachan amounts to 6,800,000 poods and is owned by four firms only.

A Good Year.—Messrs. Miloff and Tairoff in 1906, their fifth financial year, earned a profit of 166,607 roubles on a gross revenue of 737,924 roubles. The firm has debtors for 38,997 roubles, and creditors for 721,707 roubles.

A Typical Russian Decision.—A protest has been lodged by interested parties with the Ministers of Railways and Finance against the recent decision of the tank waggon allotment Committee at Baku that privately owned tank waggons shall be taken into account in the allotment in the same way as waggons owned by the railway.

Nijni-Novgorod Stocks.—The following were the stocks of various petroleum products at Nijni-Novgorod on November 1st (o.s.):—Kerosene, 2,246,500 poods; crude oil, 2,885,000 poods; residuals, 22,977,950 poods—total, 28,109,450 poods. The total stocks on the same date of 1906 was 22,365,611 poods.

Liquid Fuel Tenders.—The Moscow-Kursk-Nijni-Novgorod Railway has given out by tender its contract for the supply of 8,500,000 poods of residuals for the season 1908-9. Tenders were submitted by Nobel, the Mazout Co., Assadulaieff, and the Eastern Transport Co. The contract was secured by Nobel at the price of 38½ copecs per pood, delivered in the summer from barges at Nijni, and 39½ copecs for delivery in the winter from tanks.

Twenty-Five Per Cent. Dividend.—The accounts of the Caspian Society for 1906 (the 20th financial year), recently published in Russia, shew the following interesting figures:—Total revenue, 8,540,209 roubles; net profit, 1,749,020 roubles, dividend declared 25 per cent.; debtors, 2,189,834 roubles; creditors, 2,198,972 roubles; amortisation fund, 5,526,815 roubles; reserve fund, 875,000 roubles; special reserve fund, 845,611 roubles; working capital, 590,000 roubles.

Messrs. Mantascheff and Co.—The accounts of Messrs. Mantascheff and Co. for 1906, the eighth financial year, shew a revenue of 15,529,505 roubles, and a profit of 1,713,159 roubles. In 1905 the revenue was 15,627,415 roubles, which left a loss of 993,432 roubles. The largest part of this loss was covered out of the reserve fund, and only 202,048 roubles was carried forward to the 1906 account. The balance-sheet shews debtors for 3,928,747 roubles, and creditors for 11,842,441 roubles. The total capital, including share capital, reserve fund, etc., stands at 28,114,812 roubles.

A New Export Company.—A Russian company is now being formed to take over from the Petroleum Producte Actien Gesellschaft a German company, the refinery at Baku and export installation at Batoum owned by the latter. The founder is Mr. L. P. Spies, of Moscow. The capital is to be 600,000 roubles. This refinery and export installation originally belonged to Messrs. Gehlig, Wachenheim and Co., and are still known in Russia under that name. Some years ago they were bought by Messrs. M. Samuel & Co., and later were handed over by the latter to the Producte A. G. when they combined with the German interests in the Roumanian petroleum industry.

A Spouter in Tcheleken.—On December 14th a spouter commenced flowing on the property of Nobel Bros. on Tcheleken Island to a height of 140 feet, but caught fire immediately. The chief Government engineer in the Transcaspian province, to which Tcheleken belongs, proceeded to the spot to take steps for extinguishing the spouter. For seven days the spouter was flowing and burning, but on the eighth day the strenuous efforts to extinguish proved successful. At the time of wiring the well was still flowing, yielding 30,000 poods per 24 hours. The well is only 539 feet deep.

AMERICA.

Crude Oil Stocks.—It is estimated that the stocks of crude oil in the Illinois field at the end of the year were approximately 13,000,000 barrels. At the end of November they were over 12,000,000 barrels.

Pennsylvanian Stocks and Pipe Line Runs.—The pipe line runs and stocks in the New York, Pennsylvanian, West Virginian, Kentucky and Indiana fields for November were the smallest recorded for the past year.

Cheap Oil.—The pipe line belonging to the Prairie Oil and Gas Co., which runs from Kansas City to Chicago, burst a few days ago, and in one rural district near Chillicothe the farmers carried the oil from a formed lake in buckets to their homes.

Californian Prices.—It is reported that there has been no material change in the Californian oil market of late. The price for fuel oil remains firm at from 90 cents to \$1 per barrel, but at this figure the oil is readily sold, none going into storage.

A New Louisiana Company.—A company under the title of the Webster Gas and Oil Co. has been formed in Louisiana with a capital of \$100,000. The company owns leases of more than 8,000 acres of land in Louisiana, and will commence operations as soon as the necessary funds are available.

Is It Another Field?—A report from San Antonio, Texas, states that a good well yielding about 200 barrels daily has been recently brought in near that place. The well went through 90 feet of oil sand, and the general belief is that the prospects for drilling of many successful wells around that place are most encouraging.

To Prevent Cuts in Oil Prices.—A meeting of the Oil Producers' Association of Jefferson county, Texas, was recently held for the purpose of protecting the interests of the members from further declines in crude oil prices. The market, as the readers of the REVIEW will be aware, has been very unsettled in Texas since the output from the Indian Territory became such a factor in the Gulf Coast trade.

The Anse la Butte Field.—It will come as a surprise to many of our readers to learn that the bringing in of the gusher in the Anse la Butte field last November was the result of several years of hard toil. Prospecting work commenced just at the time that similar work was started at Spindle Top, and the coming in of the latter remarkable field caused interest in the pioneer work at Anse la Butte to fall. Since then, however, some 30 wells have been drilled, and over \$300,000 spent upon them ere the gusher was tapped.

To Repeal Countervailing Duties on Petroleum.—A dispatch from Washington, dated December 20th, and published in the *Oil, Paint and Drug Reporter*, states that a measure which is attracting much attention has been introduced into the House of Representatives by Mr. Kustermann, which provides for the repeal of certain clauses of the Dingley Act requiring the levying of countervailing duties on petroleum and its products when imported from countries which levy duties on similar products originating in the United States.

ROUMANIA.

To Facilitate Export.—The Credit Petrolifer has purchased a site at Constantza adjoining the one of the Romano-American Co., and propose erecting an export installation on it.

The Credit Petrolifer has completed and started working its new pipe line from Bustenari to Ploesti. This company now owns three pipe lines connecting the two places mentioned above.

Transfer of Bustenari Property.—On the 18th of December an agreement was registered in Bucarest for the sale, by Messrs. Secleanu Bros., of their Bustenari property to M. Michel, a Paris banker, for 3,000,000 francs, payable in monthly instalments, spread over two and-half years.

Drilling Under Difficulties.—The Steaua Romana are continuing work on their well No. 2 at Aricesti. Drilling is rendered difficult by the frequent inrush in the borehole of sand and water. There are considerable exhalations of gases, the nature of which has not yet been sufficiently investigated.

The Nafta Company is now drilling two new wells at Bustenari and two at Tintea. The company has now an output of about 1,400 tons per month, against 700 tons at the time when the properties were taken over from Messrs. Grigorescu and Vladescu. The operations of the company will be further developed in the near future.

MISCELLANEA.

A NEW CANADIAN OIL STRIKE.

A recent discovery of petroleum near St. Paul d'Abbotsford, Quebec, has created considerable excitement. Several parties have been out in the surrounding country, leasing up farms, securing the rights to drill for oil and natural gas. In other parts of the county of Rouville wells exist that are so strongly impregnated with the smell and taste of petroleum that the cattle refuse to drink the water, which goes to shew that the recent discovery may be the opening up of a new oil field, the chances of finding which were foretold by the late Sir William Logan many years ago.

BAKU PRODUCTION DURING NOVEMBER.

The production of crude oil at the Baku oil fields in November (o.s.) amounted to 38,320,603 poods, of which 10,163,243 poods were obtained from Bebe-Aibat. Spouters in November yielded at Bebe-Aibat 36,000 poods, and at Balakhany 203,700 poods.

The production in November of the leading firms was as under:—

	Poods.
Nobel Bros.	4,300,000
Caspian and Black Sea Society	2,700,000
Mantascheff and Co.	2,400,000
Baku Naphtha Co.	2,100,000
Caspian Society	2,000,000
Mirzoeff Bros.	1,200,000
Baku Russian Petroleum Co., Ltd.	1,200,000
Russian Naphtha Co.	1,200,000
Russian Petroleum and Liquid Fuel Co., Ltd.	1,100,000
Aramazd Co.	1,000,000
Nafta'an Co.	900,000
Schibaieff Petroleum Co., Ltd.	900,000
Moscow-Caucasian Co.	900,000
Pitoeff and Co.	900,000
Bibi-Eybat Petroleum Co., Ltd.	800,000
Zoubaloff	800,000
Neft	800,000
Nagieff	700,000
European Petroleum Co., Ltd.	600,000
Shikhovo Co.	600,000
Tiflis Co.	500,000
Kavkaz Co.	500,000

THE LIQUID FUEL SUPPLY OF THE RUSSIAN RAILWAYS.

A departmental committee has recently been sitting at the Russian Ministry of Commerce and Industry to consider the question of the liquid fuel supply for the State railways in connection with a proposal to use for that purpose the crude oil which the Government has to receive as royalty for the State petroliferous lands, but which royalties were hitherto paid in cash.

After an exhaustive investigation of the question the committee declared itself in principle in favour of taking the royalties in kind, adding the following desiderata:—

(1) The price at which the oil is to be supplied to the Ministry of Railways is to be determined either by the average prices of the Baku Exchange or the prices of the contracts of the Transcaucasian railway, whichever will

be the lowest; (2) In any case it is fair that a reduction of two copecs per pood shall be made in the prices so determined; (3) This method of supplying liquid fuel to the State railways to the extent of not less than 8,000,000 poods per annum and the mode of determining the price shall not be varied for a period of at least five years.

As to quality of the oil to be supplied to the railways and the selection of the plots on which the system is to be operated, the committee recommend that a special committee be appointed to consider these points.

THE DALMENY OIL COMPANY.

The report of the Dalmeny Oil Co., Ltd., which has been recently issued, states that at the close of last year's accounts there was a sum of £846 carried forward at the credit of profit and loss account, after payment of the dividends declared at the last annual general meeting. The working during the past year has resulted in a loss of £469, reducing the balance at the credit of profit and loss account to £376. The creep in the pillars of the workings mentioned in the report of last year continued involving much increased working costs, and the shale output yielded a very low quantity of products. The high price of fuel and all other material, and the high scale of wages, resulting from the high wages paid in coal mines, materially affected the cost of mining and of manufacturing the products of the company.

GROSNY PETROLEUM PRODUCTION.

The production of crude oil at the Grosny oil fields in October amounted to the unusual figure of 4,210,438 poods, against 3,003,971 produced in September. As usual the fluctuations are to be attributed chiefly to the yield of the Akhverdoff Co.'s spouters, on plot No. 22. The total production by spouters in October amounted to 1,137,000 poods, against 169,590 poods in September. The whole of this falls to the share of the Akhverdoff Co., with the exception of 51,590 poods in September and 40,000 poods in October, obtained by Maximoff's successors. Thanks to the development of their plot No. 7, the last-named firm is now coming to the front, and now occupies the fourth place among the producing firms.

The production of the principal firms in October was as under:—

	Poods.
Akhverdoff Co.	2,395,500
Spies Petroleum Co., Ltd.	635,430
Anglo-Russian Maximoff Co., Ltd.	509,100
Maximoff's Successors	165,250
Kasbeck Syndicate	124,880
Tcheleken-Daghestan Co.	111,210
North-Caucasian Oilfields, Ltd.	110,250

The total production of crude oil at the Grosny oil fields during the first 10 months of 1907 was 32,982,230 poods, of which 4,800,500 poods were obtained from spouters.

THE STANDARD OIL COMPANY.

SOME FACTS AND FIGURES.

Reprinted from the Philadelphia "EVENING POST."

—BY—

Mr. JOHN D. ARCHBOLD,
the Company's
Vice-President. . . .

Volumes have been issued in disparagement of the Standard Oil Co. or organisation—its origin, its methods and its administrators. It has also been the object of honest criticism by many who have apparently lacked the opportunity of ascertaining the facts.

I say with the utmost frankness that I now believe the policy of silence which the company maintained for so many years, amid the misrepresentations which assailed it, was a mistaken policy, which, if earlier abandoned, would have saved the company from the injurious effects of much of that misrepresentation.

It is the object of this article to submit some facts and figures bearing upon the history and activities of the company for the consideration of the fair-minded.

It has been repeatedly asserted that the commercial success of the company has not been due to enterprise and economic achievement, but almost entirely to the acceptance of railway rebates and the persistent practice of unfair industrial methods.

This charge has found its way into the press of the United States and of all foreign countries, and is destined, if not designed, to injure the prestige and good name of the company in many quarters of the world where the reliable quality and cheapness of its products are recognised, and where good faith in its commercial dealings has never been challenged.

It is not the purpose of the present article to discuss any of the issues now pending in the courts, but merely to call attention to the varied sources of the company's profits derived from a world-wide organisation and equipment—the outcome of many years of incessant and judicious work allied to far-reaching investments and a comprehensive commercial policy.

In addition to the income from the very large business of manufacturing and distributing the principal product of petroleum—refined oil—with which the public is familiar, the company has many other sources of earnings, an enumeration of which will do much to correct prevailing misconception:—

Production of crude oil, natural gas production and distribution, pipe line gathering and storage, trunk pipe line transportation.

Manufacture of all kinds of lubricating oils, paraffin wax and candles, gasolene, naphthas and other motor fuel, oils and naphtha for making illuminating gas, fuel oil.

Manufacture of sulphuric acid, and the other chemicals employed in petroleum refining; factories for making barrels, both wood and iron; factories for making cans and cases.

Works building pumps, oil and gas engines and other machinery.

Selling of lamps, of oil and gas stoves, of wicks.

Tank steamers, sailing ships and tank barges at home and abroad; tank cars and tank waggons in Europe and the Orient, as well as the United States; storage plants and warehouses at home and abroad.

Wholesale and retail distributing plants in all parts of the world.

It is not practicable to review in this article the creation and development of each of those earning avenues, or to subdivide the profits accruing from each, but they constitute the most comprehensive production, manufacture and distribution recorded in industrial history.

By way of partial illustration, the crude oil produced

in Indian Territory is transported through pipe lines 1,500 miles to refineries in New York, and the illuminating product manufactured at the said refineries is delivered into tank steamers at the company's wharves for transportation and delivery into the company's reservoirs at European seaports, and from thence, *via* the company's tank cars or river barges, to inland receiving stations, and then, *via* the company's tank waggons, practically into the lamp of the consumer—the product thus delivered having never been confined in any packages

from producing to consuming terminal.

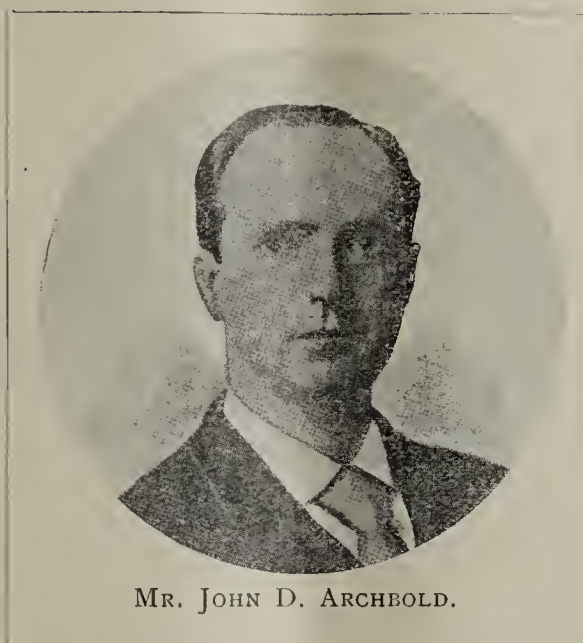
For the products which require to be marketed in barrels or cases, the company utilises the output of vast timber land for its barrel and box factories. The company also manufactures at its seaport plants about fifty million (50,000,000) tin cans per annum to meet the requirements of its Oriental and South American commerce.

The company owns and controls about one-sixth of the United States production, and thus derives all producing profit from that quantity.

The pipe lines consist of gathering and trunk lines, the entire mileage approximating 75,000 miles.

Nearly every great oil-producing territory of the United States has owed its rapid development, and the producers have owed their assured and profitable market, to the prompt energy and enterprise of the company in providing pipe lines and storage facilities.

As illustrative of the complete revolution of the company's method of transporting its products to Europe, and the growth of its European commerce partly traceable thereto, the following facts are submitted:—In 1885, 200,500,000 gallons of illuminating oil were shipped by chartered vessels to Europe—put up in



MR. JOHN D. ARCHBOLD.

barrels (and subject to a loss by leakage of from 2 to 3 per cent.)—as against only 1,750,000 gallons shipped by tank steamers. In 1906, the barrel shipments by vessel had dwindled to about 1,750,000 gallons, while 486,500,000 gallons were shipped by the company's fleet of tank steamers (and subject to a loss by leakage of only about one-quarter of 1 per cent.).

The present fleet owned by the company (comprising seventy-two (72) tank steamers and twenty-four (24) cargo steamers and vessels) will carry about 126,500,000 gallons at a single loading.

In addition to giving continuous employment to its own fleet, the company chartered outside steamers and vessels during 1906 sufficient to carry more than two hundred cargoes.

As an indication of the great economies resulting from the company's own transportation policy and investments, it may be stated that the cost of transporting its products to the principal European seaports has been gradually reduced from \$6 per ton in 1885 to \$2.50 per ton in 1906. To-day, the company's largest tank steamer will carry in one year from New York to London 37,000,000 gallons. Under old methods it would have required at least fifty (50) ordinary sailing vessels to have done the work now done by this one steamer. Under favourable conditions it takes hardly more hours to load and unload the cargo of an oil tanker than it took days to load and unload an equal quantity of oil under the old methods of sailing vessel transportation.

Under the policy of owning its own cargo vessels for transporting cans and cases to the Oriental markets, the cost of transportation has been reduced during the last seven years nearly half, or, say, from the range of 37 to 45 cents per case in 1900 to a cost of about 22 cents to-day.

The company has recently inaugurated a still further economy in ocean transportation and is now constructing a tank steamer and a bulk barge, the latter to be towed by the former across the Atlantic. The tank steamer and accompanying ocean barge will carry, combined, about 5,500,000 gallons at a single loading.

Every separate step connecting the crude oil in the ground with the refined in the lamp of the consumer is economised in every detail—namely: production, transportation by land and water, the manufacture of crude into illuminating oil and into many valuable by-products (including lubricants, fuel oil, gas oil, naphtha, benzine, motor spirits, crude and refined paraffin, wax, candles, vaseline, etc.), storage, distribution, the manufacture of barrels, boxes, tin cans, the manufacture of chemicals and other articles used in refining, the manufacture of lamps, gas and oil stoves and wicks auxiliary to and stimulating consumption of illuminating and fuel oil and natural gas.

Production, manufacture and distribution, each constitutes a separate business of itself; and each is entitled to a reasonable profit.

There is and always has been competition and the opportunity of competition, in each of those branches of business, and they have at all times been open to the

capital of the world. The company should not be censured because its enterprise has carried it everywhere.

Had the Standard Oil organisation twenty-five years ago anticipated its prosperity and capitalised its future after the manner of many industrial and railroad enterprises of the current era, it would have escaped much hostile cavil and criticism.

Had the capital been fixed at five hundred millions (\$500,000,000) in 1882, and had one or two per cent. dividends per annum been earned and declared in the early years, and had these dividends been gradually increased as assets and commerce expanded to, say, 8 per cent. in 1907 (the equivalent of 40 per cent. on the present par value of the shares), little comment would have been aroused. It is the percentage of dividend on the present capitalisation that appears excessive, and not the percentage of dividend on the actual assets and multiplied volume of business resulting from a quarter of a century of industry and enterprise.

The profits from the sources enumerated have exceeded the dividends paid for many years past, and the surplus thus resulting has been largely utilised in extending and improving the industrial equipment of the company at home and abroad, and thus economising in every direction its business administration; in purchasing producing territory, increasing pipe line and manufacturing facilities, materially enlarging its fleet, and multiplying its inland distributing stations the world over.

Free trade between the States was inherent with the creation of the Republic. To-day not only does the crossing a State frontier create interstate commerce with its endless, if needful, regulations, but each State may have a corporation law differing widely from that of its sister States. The embarrassments thus created are well known to all endeavouring to transact business concurrently all over the country. The company is persistently accused of seeking to evade the laws, when it is actually studying how to conform to them, amid a medley of conflicting interpretations.

Personally, speaking merely for myself alone, I have been for years an advocate of a comprehensive national act defining and regulating the corporations of the country upon any equitable lines not muzzling the inherent freedom of ambitious commerce. I advocated such a law as early as 1899 in my testimony before the Industrial Commission. I then said: "If you should ask me, gentlemen, what legislation can be imposed to improve the present condition, I answer that the next great and, to my mind, inevitable step of progress in the direction of our commercial development lies in the direction of National or Federal corporations. If such corporations should be made possible, under such fair restriction and provisions as should rightfully attach to them, any branch of business could be freely entered upon by all-comers, and the talk of monopoly would be for ever done away with. Our present system of State corporations, almost as varied in their provisions as the number of States, is vexatious alike to the business community and to the authorities of the various States. Such Federal action need not take away from these

States their right to taxation or police regulation, but would make it possible for business organisations to know the general terms on which they could conduct their business in the country at large. Lack of uniformity in the laws of various States, as affecting business corporations, is one of the most vexatious features attending the business life of any great corporation to-day, and I suggest for your most careful consideration the thought of a Federal corporation law."

For many years the company had no direct interest in production, and to-day it only owns or controls a moderate fraction thereof. It has, however, been the prominent purchaser, custodian and carrier for the various producing territories, and its relations to the producers have naturally constituted one of its most complex and embarrassing problems.

During the past thirty years it has secured export markets for about 60 per cent. of the manufactured products of the great crude output of the United States; has opened and sustained these markets in the face of great competition, and at great expense and effort. This foreign policy and achievement have had a most favourable influence on the welfare of the home producer, both as regards marketable volume and average profits of production.

The network of pipe lines, constructed and ramified at enormous cost, has given the producer an immediate cash market for his crude oil whenever and wherever produced, and the origin of many fortunes, large and small, in the various oil regions has been traceable to this pipe-line system, and the enterprising manner in which it has been extended and administered.

While it is true that apparently large profits have been earned through pipe lines, yet these shrink to normal profits when it is considered that the exhaustion of successive territories has frequently rendered valueless much of the company's large investments in this department. This is a most important feature of the situation commonly overlooked by unfriendly critics.

To maintain the equilibrium between consuming requirements and producing possibilities has been the real problem in the relations between the company and producers. The general policy of the company has of necessity been dictated by supply and demand. When market possibilities have exceeded current production, the higher prices resulting have encouraged prospecting; when, on the other hand, abnormal production has exceeded market possibilities, declining quotations have been inevitable. A plethora of production must always result in lessening prices.

The pendulum of adjustment has swung to and fro, and eventually to the advantage of the producer.

Whatever its critics and enemies may allege, the company has tried in the past, is now trying, and will continue to try to be fair and liberal in its relations to the producers.

Those whose lives have been spent in the industrial arena have learned the impressive lesson that commerce is a struggle. The company claims that its commercial efforts have been fairly made, and its commercial victories fairly won; that its profits have been the

legitimate reward of its industry and enterprise, and realised in the face of continuous competitive conditions the world over. It confesses itself unable to anticipate the altruistic trade policies and relationships of an Arcadia, and cannot in its ramified operations always find it possible to follow the mild pathways suggested by others for its guidance.

The charge of uncharitable attitude toward business rivals is no novelty in commercial history—and has been as persistently urged against the small competitive retailer as against the largest wholesaler.

Very much is written about the Standard's treatment of its competitors, but very little about the Standard's treatment by its competitors.

It is usually alleged that whenever the Standard, for whatever reason, advances its prices, it is oppressing the consumer; and when if, on the other hand, it lowers its prices, it is then oppressing its competitors.

Very rarely has a bankruptcy been reported among the competitors of the Standard. They are apparently maintaining a prosperous independence and employing not less than \$100,000,000 of capital. Either, therefore, the Standard's policy toward its competitors cannot have been vindictive, or the competitors have flourished in spite of the Standard's alleged vindictiveness.

The company has been persistently criticised for its so-called espionage upon the operations of its competitors. It is very doubtful if it knows more of the affairs of its competitors than its competitors know of its affairs, but it certainly has been, and will continue to be, the policy of the company to learn all it legitimately can of its competitors' progress in the home markets, and it has been, and will continue to be, the company's aim abroad to learn all that it legitimately can of the progress of its Russian, Roumanian, Galician, Dutch Indies and other foreign competitors. These industries, moreover, are equally well informed of the marketing progress and policy of the company.

Increased production demands increased absorption. The Standard Oil Co. endeavours to keep informed as to actual consumption in the world's markets—to ascertain its own percentage of such consumption and the percentage of its various competitors. If the per capita consumption in any given locality seems abnormally small, it endeavours to find the reason and to stimulate increased consumption by forcing in such a locality the sale of stoves, lamps, wicks, and whatever may tend to economise and facilitate the requirements of even the smallest consumer.

Increase of aggregate consumption being the objective point, the policy of the company is of *pro rata* benefit to all its competitors, and should deserve encouragement and not censure.

By way of illustration. The company has recently shipped to China 500,000 lamps to be sold at 10 cents or less each, and also 750,000 very cheap lamp chimneys. It is hoped millions of these cheap lamps and chimneys will later be forwarded. The company has also sold hundreds of thousands of oil stoves, great quantities of cheap lamps, and over one million (1,000,000) pounds of reliable wicks; the motive of the foregoing being less to

obtain the profit on such appliances than to stimulate the consumption of petroleum products in which all producers and refiners of petroleum at home and abroad are interested.

Ignorance of the progress and policy of competitors would mark the decadence of any merchant or corporation, wholesale or retail.

The company contends that its fighting has been fair fighting, and that it has invariably kept its agreements and manifested good faith to friend and foe; that, while admitting that it is a business organisation and not a benevolent institution, its policy toward its rivals would compare most favourably—alike from the standpoint of equity and liberality—with the usages of the business world or the records of human history.

The desire and ambition of the labouring man are, naturally, to obtain good wages, reasonable hours, permanent employment, a safe paymaster, and a certain interest and consideration on the part of the employer, irrespective of the mere wage given and received.

It has been the aim of the company to meet these several conditions, and it has reason to feel that it has done so. It has been a very long time since the company has had a serious strike in any of its establishments, the few disagreements arising from time to time having been found susceptible of adjustment through mutual concession and good feeling.

Some years ago the company inaugurated a pension system, to the benefits of which every employé, including every labouring man, is eligible or may become eligible, and there are many veterans in the company's service to-day who are grateful for this privilege. It is hoped and believed that this pension system will continue to stimulate long and loyal service and promote reciprocity of interest and good feeling between employer and employé.

To-day there exist abroad three great petroleum organisations, any one of which might be designated a monopoly with greater propriety than the Standard Oil Company, and two of which are distinctly holding companies:

First: "The European Petroleum Union," which has combined Russian and Roumanian interests, under the guidance of the most prominent banks of the German Empire.

Second: "The Bataafsche Petroleum Maatschappij," created to facilitate amalgamation of two of the most powerful corporations in petroleum history—namely, the "Shell Transport and Trading Company of London" and the "Royal Dutch Company of The Hague"—and thus approximately to monopolise the entire producing and refining industry of the Dutch Indies, with its commanding geographical position, for the supply of the great consuming markets of the entire Orient.

Third: "The Burmah Oil Company," created to monopolise not only the production of crude oil in the extensive territories of Burmah, but also its transportation, manufacture, storage and distribution. The Indian Government protects by import duty the commerce of this concern in the vast Indian Empire.

Acting under the supposed industrial freedom contemplated by all international treaties of amity and commerce, the Standard sought participation in the Burmah business, but has been denied up to date even bulk-storage facilities, and upon appealing for its commercial rights to the parent British Government was met by the contention that India and Burmah were not included in the Anglo-American Treaty of 1815. This is technically true, although entirely inconsistent with

Anglo-American commercial relations for the past quarter-of-a-century.

The foregoing statements are cited to illustrate (and they are very fractional illustrations only) how powerful are the combinations which the Standard Oil Company encounters abroad, and which are apparently stimulated by the encouragement of their respective governments.

It has certainly never been the policy or practice of the Standard to market its products abroad at a loss and attempt to recoup this loss by raising its price to the home buyer.

To establish and maintain exact parity of prices between the endless consuming markets of the world, or even in widely-separated points in the same country, would be a manifest impossibility, but the Standard is able to assert that, notwithstanding its continuous competition with foreign industries enjoying the great advantage of geographical position and much cheaper labour, it has marketed its products abroad at a fair profit, which has frequently aided the company in maintaining low prices in the United States.

It should not be overlooked that for a great many years about 60 per cent. on the average of its products manufactured in America has been consumed abroad, as against 40 per cent. at home; but the entire 100 per cent. has been produced and manufactured in the United States, with all the economies incident to large volume, and the benefits of which are shared by the world's consumers.

Should the time arrive when foreign industries prevent the marketing of American petroleum abroad, except at serious loss, it will be a bad day not only for the company, but for the country. The abandonment of the export trade would eventually mean either higher prices to the American consumer, or disaster to producer, refiner and labourer. The country at large is benefited, not injured, by sustaining the export commerce in petroleum. The loss of this vast foreign outlet would result in the crippling of the entire industry.

It is impossible to compute whether up to date the net financial result of the company's refineries has averaged better from the domestic than from the foreign trade. Conditions are constantly fluctuating in the various markets of the world—conditions of competition, of quality, of supply and demand, of transportation, of distribution expenses, of local speculation, etc., etc.

Critics of the company have frequently contrasted the retail prices of high-grade oils consumed in the United States with wholesale prices of low-grade oils destined for export. Of course, such comparisons are valueless when no account is taken of the difference in quality and quantity, and this would be equally true whether the comparisons were made at home or abroad.

Should foreign competition at any future period confront the company with the alternative of selling its products at a loss in certain markets or abandoning those markets, the former horn of the dilemma might be decided upon if the crisis was regarded as a temporary one; the company being further compelled to give some consideration to its extensive property investments abroad, and to the thousands of its employés relying upon it for permanent occupation.

It may be emphatically reiterated that it has been no part of the policy of this company to benefit the foreign consumer at the expense of the American consumer, but it has been, and must be, its policy to maintain its foreign commerce, if possible, even should future sacrifices become necessary for so doing. Any other policy would surely be of eventual detriment to the home con-

sumer, to the home producer and to the nation itself, as well as to the company.

It was the demoralised condition of the business that not only originally invited but almost necessitated the union of brains and capital which rescued the industry from disaster and gradually evolved the Standard Oil organisation. What has been the sequel, gauged from the standpoint of the greatest good to the greatest number?

Seventy-five thousand miles of pipe line penetrate the various producing territories of the country, giving the army of producers a regular cash outlet for their crude oil whenever and wherever produced, and almost invariably at remunerative figures. Many a fortune and many a competency in the oil regions has been traceable thereto.

Through great foreign companies which it has created, and through many foreign branches which it has established, the company has administered and sustained the export commerce of American petroleum upon the industrial battle-grounds of the world.

Through the construction and control of a great fleet it has very materially economised the delivery of its products to even the most distant markets.

Hundreds of millions of foreign gold have been required to pay for its exports (all manufactured in the United States), and not only yielding great and legitimate advantage to the company and to the American labourer and to the American producer, but also constituting a highly important factor in the favourable adjustment to the trade balances of the nation with other countries.

As eloquent of economic achievement, it may be cited that in 1878 (the earliest year for which reliable statistics are available, and several years prior to the completed organisation of the Standard Oil Company) about 340,000,000 gallons of petroleum products were exported, valued at about \$46,750,000. In 1906, about 1,050,000,000 gallons of kindred products were exported, valued at about \$75,000,000; therefore, while the aggregate gallonage increased about 210 per cent., the valuation increased only about 60 per cent.

The company is essentially and exclusively a petroleum concern (unless natural gas may not be so regarded) and participates in whatever may concern the economic manufacture, distribution and consumption of petroleum and its many products. This includes production, transportation by pipe line, tank car, tank steamer, tank barge, tank waggon; the manufacture of illuminating oil, lubricating oil, naphtha, fuel oil, gas oil, motor oil; the manufacture of tin cans, boxes, barrels; the manufacture of stoves, lamps and wicks; the manufacture of chemicals employed in refining; the manufacture of paraffin wax, candles, vaseline and other valuable by-products.

Before the passage of the Interstate Commerce Act all wholesale concerns bargained for their transportation as they bargained for their merchandise. Since the passage of that Act the company has not received railroad rebates on its interstate oil shipments.

The company's profits have been legitimate profits, and they have been only normal when the hazardous character of the business is considered; and when computed on the basis of the intrinsic value of the assets of the company.

The Standard Oil Company is not a one-man power, but an aggregate of capital and industrial experience. It is a deliberative, not an impulsive or a speculative organisation. Commercial plunging has no place in its policy and no place in its history. It has sought, on the

other hand, to establish equitable relationship between supply and demand, between producer and consumer, and to prevent the wild fluctuations of the market value of petroleum which often agitates the trading in so many commodities, and which frequently results in widespread disaster.

The company is administered by a group of men who, individually or collectively, are experts in each department of its ramified affairs. Some of these men have held prominent positions in the company from the day of its inception, while others have been admitted into its councils from time to time in recognition of exceptional business proficiency, the policy being to encourage development in the ranks. The possession of capital *per se* is no pre-requisite for promotion, and the civil service policy adopted has proved a great stimulant to efficiency of administration, and has created an *esprit de corps* which was never more manifest than it is to-day.

In the company's creation and growth it would be idle to deprecate the ambition to secure the financial rewards incidental to successful and legitimate commerce. It has, nevertheless, been a source of pride and satisfaction that the company has brought this great American product within the reach of the scantiest purse; that it has forced it into nearly every niche and corner of the civilised and uncivilised world, promoting among the poorest classes of many countries a host of evening occupations—industrial, educational and recreative—not feasible prior to its introduction. While so doing it has also sustained the supremacy of this national product against some of the most prominent financial and industrial magnates of the world, employing in the aggregate not less than \$500,000,000 in competitive petroleum enterprises, and moreover, frequently encouraged and sometimes directly supported by their respective Governments.

The company is not benefited by any protective tariff in the United States.

It has aimed to secure the contentment of its employés by liberal and considerate treatment allied with a pension system, assuring a competency for waning years. About 65,000 employés are or may become eligible for this pension, and no less than 500,000 men, women and children are directly or indirectly interested in the preservation of the company.

It may further be declared that the rights and equities of not even the smallest of its thousands of shareholders have ever been disregarded or sacrificed, and that in the acquirement of its properties and materials there has been no intermediate favoured syndicate.

The Standard Oil Co. is neither a mystery nor a monopoly, and it seeks neither to rule nor to ruin. The company has certainly endeavoured not to cling to the obsolete nor to tarry by the wayside. Its representatives are to be found in almost every important trade mart of the globe; its distributing plants are dotting every land, and its ships are floating on every sea.

I contend that this industrial structure has earned the encouragement rather than the frown of legislation, and that it never could have been developed and sustained to date if its many eventful years of contact with the consuming and commercial communities of the world had not been characterised by the highest standard of commercial honour—if good faith at home and abroad had not been its corner-stone, and if it had not conducted its world-wide commerce in conformity to the many laws of many lands.

To disintegrate its varied arteries of trade, reared and developed at home and abroad with such indefatigable enterprise and industry, would be a national calamity.

THE AURORA COMPANY OF ROUMANIA.

FURTHER DETAILS.

In our last issue, we gave some information concerning the operations of the Aurora Co. of Roumania, but since then additional details have been received by us, which are well worth publishing.

In regard to storage accommodation, the company possesses the following installations:—

			Tanks.		Capacity in Tons of Water.
At Roustchouk	..	..	2	..	1,465
„ Bustenari	..	..	6	..	3,199
„ Tergoviste	..	..	44	..	9,908
„ Baicoi	..	..	49	..	35,415
Total	..	..	161	..	49,987

The company owns a large number of tank waggons which is being continually being added to. In 1900, it had 82 tank waggons, whilst now it utilises in Roumania and abroad 312 waggons. The company has also 70 waggons on order, which will be ready in the near future.

The position occupied by the Aurora Co. in the Roumanian petroleum industry is made clear by the following figures:—

		Total Crude Oil Production in Roumania. Tons.	Quantity treated by the Aurora Co. Tons.	Per Cent.
1904	..	500,561	95,429	19
1905	..	614,870	135,161	22
1906	..	807,091	159,665	18

The part played by the Aurora Co. in the Roumanian export trade is shewn in the following figures:—

			Total Exports.	Exported by Aurora Co.	Per Cent.
Illuminating Oil—					
1904	..	..	78,270	19,746	26.50
1905	..	..	118,134	34,138	28.90
1906	..	..	196,631	47,372	24.60
Benzine—					
1904	..	..	36,969	12,760	34.52
1905	..	..	46,699	16,867	36.12
1906	..	..	71,114	18,272	25.40
Crude, Residuals, Lubrica- ting Oils, etc.—					
1904	..	..	45,204	27	0.66
1905	..	..	49,515	8,733	17.64
1906	..	..	53,374	11,688	21.90

The amount invested by the company in the Roumanian petroleum industry has been growing steadily, and on the 30th June, 1907, was 10,110,574 francs.

The company has been a dividend paying concern

throughout the seven years of its existence, the dividends paid being:—For the financial year 1899-1900, 5.5 per cent.; 1900-01, 5.47 per cent.; 1901-02, 9 per cent.; 1902-03, 5.40 per cent.; 1903-4, 7.87 per cent.; 1904-5, 6 per cent.; and 1905-6, 5 per cent.

OPERATIONS OF ROUMANIAN REFINERIES DURING OCTOBER.

The quantity of crude oil treated at the Roumanian refineries during October amounted to 86,311 tons. The output of various products was as under:—

		Tons.
Benzine	..	13,240
Kerosene and distillate	..	23,883
Lubricating oils, etc.	..	4,877
Residuals	..	41,773
Total	..	83,773

The deliveries from the refineries during October for the home trade and the stocks at the end of the month were:—

		For Home Trade. Tons.	Stocks on Oct. 31st. Tons.
Benzine	..	66	30,458
Kerosene and distillate	..	4,928	50,372
Lubricating oils	..	460	16,251
Residuals	..	31,302	59,460
Total	..	36,756	156,541

The output of paraffine scale in October was 41 tons, the deliveries for home consumption were 56½ tons, and the stock on 31st October was 23½ tons.

RUSSIAN OIL IN GERMANY.

The Administration of German State Railways is now considering a petition for extending to Russian benzine and other products (except crude oil and refined benzine) the special reduced rates which for some years have been applied to Austro-Hungarian and Roumanian crude benzine, *i.e.*, 2.2 and 2.6 pfennigs per ton-kilometre and additional 6 pfennigs. At present Russian oils are rated under the so-called class B of the German railway tariff, whilst the petition now under consideration seeks to place them under the special Tariff III., which on a distance of 400 kilometres will mean a reduction of 15.20 marks per ton. The question has already been raised before, but within the narrow limits of the interests of the German refineries. Now it is considered from a much wider point of view, and is intended to benefit the consumers of benzine for motor cars and motive power purposes.

GULF REFINING CO., Refiners of Indian Territory and Texas Petroleum.

We make a Speciality of

SUPERIOR LUBRICATING OILS OF HIGH VISCOSITY AND LOW COLD TEST.

Our Kerosene and Gasoline are manufactured from high grade Indian Territory Crude Oil.

Prompt Shipments from New York, Philadelphia,
Boston, New Orleans and Port Arthur, Texas.

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The American Oil Market.

New York, Week ended Dec. 21st.

Probably the most interesting development of the week in the lower South-west fields has been the extension of the Holidays Cove pool in Brook county, West Virginia, shewing a productive area of probably two miles in length, with the width still to be determined. Operators express confidence that the pool may prove of greater extent than the Congo pool in Hancock county, but it is scarcely expected to yield so many good producers as the latter. Further tests in the fourth sand districts of Wetzel and Monongalia counties in the same State have not been of a nature to stimulate much encouragement beyond an occasional showing for a 15 to 25-barrel well. There has been a material decrease in the output of the best producers during the last few days, but several are still in excess of 100 barrels a day. A late report credits the recent leader in Clay district, Ritchie county, with 175 barrels, against 300 barrels, as noted previously. The good producer in the Wallace district of Harrison county has maintained an average of 110 barrels. Operations in Marion, Lincoln and Doddridge counties have furnished little of noteworthy interest. New work is in progress in Gilmer county. Recent developments of the Lima field have been of a routine character. Attempts to find an extension to the lately promising Tiffin field in Seneca county, Ohio, have failed to yield any results suggestive of a lead, and the section furnishes another example of the freakish formation of the oil strata. In Indiana the older districts are regarded as affording the more favourable chances, says the *Oil, Paint and Drug Reporter*, but there is a prospect that the untried district between South Bend and Laporte may be subjected to a series of tests. Advices from our correspondent in the Illinois field note the usual lull in operations incident to the holiday season, but the spurt previously indulged in to complete the wells that were near the pay sands produced some extraordinary results, augmenting materially the list of gushers in the Robinson field of Crawford county. Summarising our correspondent's report we find the record of notable producers in this field embracing the following results:—One good for 1,500 barrels, one for 1,200 barrels, one for 900 barrels, one for 600 barrels, six for 500 barrels, six for 400 barrels, nine between 300 and 350 barrels, twenty between 200 and 250 barrels, forty-seven between 100 and 175 barrels. Lawrence county has to its credit one good for 600 barrels, two for 300 and 350 barrels, respectively, seven between 200 and 250 barrels, and eighteen between 100 and 150 barrels. Clark county also furnished several completions of importance, including two wells each good for 200 barrels, and seven ranging from 100 to 175 barrels. The Illinois industry is in a most prosperous state, but the lack of adequate pipe line facilities continues a serious handicap. The runs for the first two weeks of the current month aggregated 623,527 barrels, against which were recorded the insignificant total of 1,792 barrels delivered, the balance being tanked. Developments in the Kentucky-Tennessee field have resulted in little of particular interest.

REFINED AND PRODUCTS.—Domestic requirements of refined have been of steady seasonable proportions, while the export movement has been materially augmented, principally on account of the availability of the tank fleet, 9,985,200 of the total clearances of 14,426,230 gallons from the local port during the week having been shipped in bulk. Our record for the previous week was 10,716,210 gallons (5,562,500 in bulk). In addition there has been a brisk movement in charter engagements reported during the week, including 40,000 cases for Las Palmas and (or) Teneriffe, prompt, 100,000 cases to Calcutta, January-February, 140,000 cases to Taku Bar, January-February, 170,000 cases to four ports in Java, March-April, and 130,000 cases to three ports on the River Plate, January, all New York loading.

Exports of naphtha shew a substantial gain, our record for the week totalling 143,800 gallons, against 52,100 gallons, as previously noted.

CLOSING QUOTATIONS

	CRUDE.	Week ended	
		Dec. 14.	Dec. 21.
	In cents per gallon.	1907.	1907.
Pennsylvania crude in bbls.	—	—
Pennsylvania crude in bulk	—	—
Residuum, bbls. for export	—	—

CRUDE AT THE WELLS.

The quotations for oil represented by credit balances were:—

		Week ended	
		Dec. 14. 1907.	Dec. 21. 1907.
Pennsylvania		\$1.64	\$1.78
Tiona		1.74	1.78
North Lima		0.98	0.94
South Lima		0.93	0.89
Indiana		0.93	0.89
Illinois, heavy, below 30 deg. ..		—	0.60
Kansas and Indian Ter., 32 deg. and above		0.54	0.41
Heavy		—	0.28
Humble, Tex.		—	0.77
Saratoga		—	0.75
Sour Lake, Tex.		—	0.79
Jennings, La.		—	0.74
CANADIAN OIL:			
Petrolia		1.37	1.34
Oil Springs, less pipeage		1.44	1.41

REFINED—FOR EXPORT.

				Week ended	
				Dec. 21.	
In cents.				S.W.	W.W.
Barrels, cargo ..	..	per gal.		8.75	@ 10.75
Philadelphia ..	..	..	..	8.70	@ 10.70
Bulk, New York ..	..	..	..	5.00	@ 7.00
Bulk, Philadelphia ..	..	..	..	4.95	@ 6.95
Cases, New York ..	..	..	..	10.90	@ 13.90
Cases, Philadelphia ..	..	..	..	10.85	@ 13.85

REFINED IN CASES—110 FIRE TEST.

		Week ended	
		Dec. 14. 1907.	Dec. 21. 1907.
3,000 to 10,000		11.05	11.05
1,000 to 3,000		11.10	11.10

REFINED—JOBGING LOTS.

In barrels, pkgs. included.

		Week ended	
		Dec. 14. 1907.	Dec. 21. 1907.
120 fire test, S.W.	in barrels	12	12
130 fire test, S.W.		12½	12½
150 fire test, W.W.		13½	13½
In bulk from tanks		10	10
300 fire test		13½@14	13½@14

NAPHTHA AND GASOLENE.

		Week ended	
		Dec. 14. 1907.	Dec. 21. 1907.
Naphtha, crude, car. lots, 68 @ 72 deg. ..		15.00	15.00
Gasolene, 86 deg.		24.00	24.00

PENNSYLVANIAN OIL RUNS from Dec. 10th to Dec. 16th were:—Dec. 10th, 116,572; Dec. 11th, 188,776; Dec. 12th, 183,749; Dec. 13th and 14th, 178,022; Dec. 15th, 212,793; and Dec. 16th, 82,349.

THE DELIVERIES OF PENNSYLVANIA OIL from Dec. 11th to Dec. 17th were:—Dec. 11th, 178,206; Dec. 12th, 193,115; Dec. 13th, 228,718; Dec. 14th and 15th, 338,319; Dec. 16th, 177,087; and Dec. 17th, 201,867.

CLEARANCES FOR THE WEEK.

During the week ended Dec. 20th, and since Jan. 1, the clearances of petroleum, in gallons, from the port of New York, were as follows:—

		Week.		Year.		1906.	
		Dec. 20th	Jan. 1st	Dec. 20th	Jan. 1st	Dec. 20th	Jan. 1st
Refined		14,426,230	482,070,325	453,304,888			
Crude		7,500	2,683,955	432,100			
Naphtha		143,800	10,924,050	14,374,484			
Residuum		—	2,737,007	4,304,100			

EXPORT STATISTICS.

The total exports from the port of New York and from the United States have been:—

		Gallons.	
		Dec. 20th	Jan. 1st
From New York, week ended Dec. 20th ..		19,242,473	
Total from New York, from Jan. 1st, 1907 ..		695,533,383	
Same period last year		595,056,544	
Increase		100,476,839	
From United States, week ended Dec. 20th ..		24,274,526	
Total from United States, since Jan. 1st, 1907 ..		1,247,653,378	
Same period last year		1,182,004,369	
Increase		65,649,009	

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The "Review" Shipping List.

JANUARY 3, 1908.

(The following abbreviations are used in this table:—L. Left; P. Passed; Arr. Arrived; Sp. Spoken; Tr. Trading.)

Vessel.	From.	For.	Latest Date and Position.	Vessel.	From.	For.	Latest Date and Position.
ALCHYMIST	Southampton	Hamburg ..	Arr. Dec. 22	ETELKA	Cette	Philadelphia	L. Algiers, Dec. 21
ALICE ISABELLE..	Philadelphia	Sables d'Olonne	Arr. Dec. 30	EUPLECTELA	Balekappan	Singapore ..	Arr. Dec. 29
ALEMBIC	New York ..	Shoreham ..	Sp. Dec. 3, 39 N. 65 W.	EXCELSIOR	Hamburg ..	New York ..	L. Tyne, Dec. 24
AMERICAN	New York ..	Puerto	Arr. Dec. 15	EZIO	—	—	Coasting Peru
APPALACHEE	Bengkalis ..	San Francisco	L. Dec. 28	FRANCE MARIE ..	Philadelphia	Marseilles ..	Arr. Dec. 18
APSCHERON.....	Batoum	Genoa	P. Constant'ple, Dec. 29	GEESTEMUNDE ..	Tyne	Philadelphia	P. Dunnet Head, Dec. 16
ARAL.....	Tyne	Philadelphia	L. Dec. 22	GENESSE	London and Tyne	New Orleans	Arr. Dec. 26
ARAS.....	New York ..	Hamburg ..	Arr. Dec. 27	GEORGIAN PRINCE	Tyne	New York ..	L. Dec. 15
ARGYLL	—	—	Coasting U.S. (Pacific)	GOLDMOUTH	Singapore ..	—	At Suez, Dec. 28-9
ASHTABULA	San Francisco	Shanghai ..	Arr. about Dec. 2	GUTHEIL	Philadelphia	Swinemunde.	P. Dunnet Head, Dec. 29
ASTRAKHAN.....	Philadelphia	Dover	L. Dec. 23	HAINAUT	Alexandria ..	Antwerp	P. Malta, Dec. 30-1
ATLAS	—	—	Coasting U.S. (Pacific)	HARRY WADSWORTH	Port Arthur (Texas)	Manchester	Arr. Dec. 29
AUGUSTA	Kustendje ..	Valloe	L. Algiers, Dec. 24	HELIOS.....	New York ..	Hamburg ..	L. Dec. 29
AUGUST KORFF..	Philadelphia	Manchester..	L. Dec. 28	HOTHAM	Middlesbro'	New York ..	L. Dec. 10
AUREOLE	Dartmouth..	New York ..	P. Prawle Pt., Dec. 27	HOUSATONIC	Bengkalis & Nordenhamn	Barrow	P. Beachy Head, Dec. 18
AZOV.....	—	—	Trading on W.C. of South Amca.	IMPERIAL	—	—	Tr. on Lakes btn. U.S.A. and Can.
BAKU STANDARD	Rouen	Philadelphia	At Queenstown, Dec. 13	IOANNIS COUTZIS	Batoum	Dunkirk	L. Dec. 26
BALAKANI	Tyne	Port Arthur (Texas)	L. Dec. 31	IROQUOIS	New York ..	London	L. Dec. 23
BATOUM	Sumatra	U.K.	L. Dec. 24	J.B.AUG.KESSLER	Thameshaven	Philadelphia	At St. Michaels, Dec. 30
BAYONNE	Philadelphia	St. Louis (Rhône)	Arr. Dec. 28	JAMES BRAND	Philadelphia	London	Arr. Dec. 25
BEACON LIGHT ..	Rotterdam ..	Philadelphia	P. Scilly, Dec. 14	JULES HENRI	Marseilles ..	Philadelphia	P. Gibraltar, Dec. 19
BEME	Bombay	Rangoon....	L. Oct. 22	KURA	Philadelphia	Hull	Arr. Dec. 29
BLOOMFIELD	Sunderland..	Penarth	Off Barry Island, Jan. 1	LA CAMPINE.....	Antwerp	Philadelphia	Off the Wight, Dec. 13
BORJOM	Alexandria..	Batoum	P. Dardenelles, Dec. 25	LA FLANDRE	Antwerp	Philadelphia	Arr. Dec. 30
BRILLIANT	Tyne	Philadelphia	L. Dec. 22	LA HESBAYE.....	Antwerp	Philadelphia	Arr. Dec. 21
BROADMAYNE....	Dartmouth..	Philadelphia	P. Prawle Pt., Jan. 1	LA MADELEINE ..	Algiers	Brest	Arr. June 16
BULLMOUTH	Shanghai ..	Palembang..	Arr. Dec. 26	LA VIGUESA.....	Corunna	Ferrol	L. Nov. 23
BULYSESSES	New York ..	Madras	P. Perim, Dec. 22	LACKAWANNA....	Kustendje ..	India	L. Dec. 27
BURGERMEISTER	Hamburg ..	New York ..	Arr. Dec. 22	LANSING.....	Pt. San Luis	San Francisco	L. Dec. 13
PETERSEN	—	—	—	LE COQ.....	Philadelphia	La Pallice & Bordeaux	L. Dec. 28
CALCUTTA.....	San Francisco	Shanghai ..	Arr. Jan. 2	LOUTSCH	Batoum	Odessa	L. Dec. 5
CAPTAIN A. F. LUCAS	London	Pensacola ..	Arr. Dec. 6	LUCERNA	New York ..	Bergen	—
CARDIUM	Cardiff	Kustendje ..	P. Gibraltar, Nov. 25-26	LUCILINE	New York ..	Rouen.....	L. Dec. 22
CATANIA	San Francisco	Tacoma	Arr. Dec. 13	LUMEN.....	Port Talbot	Port Arthur (Texas)	Arr. Dec. 24
CAUCASIAN	Port Arthur (Texas)	Hamburg ..	Arr. Jan. 1	LUX	Kustendje ..	Havre	P. Constant'ple, Dec. 30
CHARLOIS	New York ..	Amsterdam..	L. Dec. 18	MANHATTAN	New Orleans	Bremen	L. Dec. 24
CHESAPEAKE	Aroe Bay ..	Philadelphia	Arr. Jan. 1	MANNHEIM	Amsterdam..	New York ..	L. Dec. 25
CHESTER	Antwerp	New York ..	P. Scilly, Dec. 24	MARGARETHA ..	Kustendje ..	Hull.....	P. Beachy Head, Jan. 1
CIRCASIAN PRINCE	Caleta Buena	Callao	L. Oct. 3	MAVERICK.....	Seattle	San Francisco	Arr. Oct. 6
CLAM	—	Singapore ..	Arr. Dec. 23	METEOR	Batoum	Vladivostock	At Singapore, Dec. 3
COL. E. L. DRAKE	Portland (O.)	San Francisco	Arr. Dec. 18	MEXICAN PRINCE	Kustendje ..	Rouen.....	P. Constant'ple, Dec. 26
COWRIE	Venice.....	Kustendje ..	L. Dec. 28	MIRA	Tyne	Batoum	P. Gibraltar, Dec. 21
CUYAHOGA	Philadelphia	Manchester ..	Arr. Dec. 18	MUREX.....	Tsingtan	Singapore ..	L. Dec. 26
CYMBELINE	Avonmouth..	New York ..	L. Dec. 24	NARRAGANSETT..	London	New York ..	L. Jan. 1
CZAR NICOLAI II.	Hamburg ..	Batoum	P. Gibraltar, Dec. 20	NERITE	—	—	Tr. in China Seas
DAGHESTAN.....	Swansea	Batoum	P. Oitavos, Dec. 24	NEW YORK	New York ..	Southampton	L. Dec. 28
DAKOTAH	San Francisco	Hong Kong	L. Dec. 19	OCEAN	Kustendje ..	Antwerp....	Arr. Dec. 30
DELAWARE	London	New York ..	P. Scilly, Dec. 15	OILFIELD	New York ..	Rouen.....	L. Dec. 19
DEUTSCHLAND ..	Rotterdam ..	New York ..	Arr. Dec. 26	ORANJE PRINCE..	Tyne	Manzanillo & Ensenada de Morra	L. Dec. 7
DIAMANT	Philadelphia	Christiana ..	P. Del. Break, Dec. 14	ORIFLAMME	Rouen.....	Philadelphia	Arr. Dec. 29
EDWARD DAWSON	Antwerp	Middlesboro	Arr. Dec. 13	OSCEOLA	Wilmington	Bremen	Arr. Dec. 20
ELAX.....	Bombay	Singapore ..	L. Dec. 23	OTTAWA	Manchester	London	P. Lizard, Jan. 1
ELISE MARIE	Danzig	New York ..	L. Tyne, Dec. 17	OURAL	Philadelphia	Hamburg ..	Arr. Dec. 21
ENERGIE	Philadelphia	Danzig	P. Elsinore, Dec. 30	PALEMBANG	Hong Kong..	Palembang..	L. Oct. 24
ERIVAN	Ellesmere ..	Batoum	P. Sagres, Dec. 30	PAULA	Hamburg ..	Philadelphia	Arr. Dec. 30
				PECTAN	London	Emden & Galveston	P. Prawle, Dec. 23

Vessel.	From.	For.	Latest Date and Position.	Vessel.	From.	For.	Latest Date and Position.
PENNOIL.....	Rotterdam ..	Philadelphia	P. Butt of Lewis, Dec. 25	SPONDILUS	Tyne	Singapore ..	P. Malta, Jan. 1
PERLAK	Colombo....	Sumatra	L. Dec. 11	STANDARD	Philadelphia	Swinemunde	P. Del. Break., Dec. 20
PHOEBUS	Hamburg ..	New York ..	P. Dunnet Head, Dec. 19	STROMBUS	Bremerhaven	Batoum	L. Portland, Dec. 28
PINNA	Gaviota	Yokohama ..	Arr. Dec. 30	SURAM.....	Amsterdam..	Pensacola ..	L. Dec. 31
POTOMAC	Sunderland ..	—	P. Dunnet Head, Jan. 1	SUWANEE	Philadelphia	Hull	P. Lizard, Jan. 2
PROMETHEUS....	New York ..	Rotterdam ..	L. Dec. 28	SVIET	Batoum	Odessa	L. Dec. 8
PRUDENTIA	Palembang..	Shanghai ..	L. Balekappan, Nov. 21	TELENA	New York ..	Savona	Arr. Dec. 26, & Sd. Dec. 30
QUEVILLY.....	Rouen.....	Philadelphia	Arr. Dec. 29-30	TEREK.....	Port Arthur (Texas)	London	Arr. Dec. 31
RION.....	Penarth	Kustendje ..	P. Barry Island, Dec. 28	TIFLIS	Batoum	Antwerp	Arr. Dec. 30
ROCK LIGHT	Kustendie ..	Dublin	P. Gibraltar, Dec. 25-6	TIOGA	Philadelphia	Queenstown	P. Del. Break., Dec. 18
ROMANY.....	Bombay	Cochin	L. Dec. 30	TONAWANDA	San Francisco	Hong Kong	L. Dec. 5
ROSSIJA	Tyne	Pensacola ..	L. Dec. 11	TROCAS	Balekappan	Calcutta	L. Samboe, Dec. 26
ROTTERDAM	Calcutta	Boston & New York	Arr. Dec. 22	TURBO.....	Batoum	Hamburg ..	L. Algiers, Dec. 28
RUSSIAN PRINCE	Philadelphia	Tampico	L. Dec. 23	TUSCARORA	Kustendje ..	London	P. Sagres, Dec. 29
SALAHADJI	—	—	Tr. Sts. Settlem'ts and Java Seas	TWINGONE	Rangoon ..	Madras	Arr. Dec. 12
SAN CRISTOBAL..	Rouen.....	Tyne	Arr. Dec. 31	VEDRA.....	Palembang..	Yokohama ..	L. Dec. 3
SAN IGNACIO	Pasages	Philadelphia	Arr. Dec. 18	VILLE DE DIEPPE	Rouen.....	Philadelphia	L. Dec. 22
DE LOYOLA	—	—	—	VOLUTE	Singapore ..	Soesoe.....	L. Dec. 29
SAXOLEINE	Tyne	Philadelphia	P. Dunnet Head, Dec. 19	WASHINGTON....	New York ..	Hamburg ..	L. Dec. 24
SEMINOLE.....	—	Muroran	In Port, Jan. 1	WEEHAWKEN	Tyne	New York ..	Arr. Dec. 22
SINGU	—	—	Tr. in East Indies	WILLKOMMEN....	Philadelphia	Stockholm ..	P. Butt of Lewis, Dec. 23
SNOWFLAKE.....	Penarth	Novorossisk	P. Gibraltar, Dec. 25	WINNEBAGO	Canton	San Francisco	Arr. Dec. 27
SOYO MARU	Antwerp	San Francisco	Sd. Corannel, Dec. 13				

Latest Market Intelligence.

LONDON OIL MARKET.

Supplied by Messrs. Benjamin & Gee, 31, St. Mary Axe, E.C.

January 3rd, 1908.

The Refined Petroleum market is unchanged, the latest quotations being : — Russian, 6 $\frac{3}{4}$ d. ; American, 7 $\frac{1}{2}$ d. ; Water White, 8 $\frac{1}{2}$ d. ; Roumanian, 6 $\frac{3}{4}$ d.

LUBRICATING OILS

are unaltered as follows :—

American pale, £7 7s. 6d. to £11.
American dark cylinder, from £9 2s. 6d.
American filtered cylinder, from £11 19s. 6d.
No. 1 Russian, £10 5s.

TURPENTINE.

American Turpentine has again been weak and shews a considerable fall since our last report, being now quoted 32s. for Spot and 9d. to 1s. higher for the first four months.

LIVERPOOL OIL MARKET.

January 2nd.

Refined oils are quiet, and sellers quote 6 $\frac{3}{4}$ d. for Russian, Galician or Roumanian; and 7 $\frac{1}{2}$ d. to 8 $\frac{1}{4}$ d. per gallon for American.

PETROLEUM SPIRIT continues at 1s. 0 $\frac{1}{2}$ d. to 1s. 3d. per gallon for American deodorised, according to quality on the spot.

LATEST AMERICAN PRICES.

NEW YORK, January 2nd.

Refined, in cases, is steady at 10.90; Standard White, 8.75; Credit balances, 1.78c.

PHILADELPHIA, January 2nd.

Standard White is still quoted at 8.70.

RUSSIA.

BAKU, December 30th.

The Baku oil market remains unchanged. Crude oil, spot, 24 $\frac{3}{4}$ copecs per pood. Crude, delivery during 10 months, 25 $\frac{1}{2}$ copecs; residuals, delivery December-January, 26 copecs; kerosene, in ships, 34 $\frac{1}{2}$ copecs.

BELGIUM.

ANTWERP, December 30th.

The petroleum market is firm. Price of Standard White, spot, 22 francs per 100 kilos.

FRANCE.

PARIS, December 30th.

Illuminating oil is quoted in bulk, in whole tank waggons, 23 francs per hectolitre; spirit, 34.25 francs per hectolitre. Special white oil, 31 francs per hectolitre.

GERMANY.

HAMBURG, December 30th.

The kerosene market is quiet. The price of American Standard White is 7.55 marks per 50 kilos; Russian, 7.35 marks.

ROUMANIA.

December 30th.

Crude oil from different fields, including	Francs.
pipe line charges, per 100 kgs. ...	3.90-4.05
Refined oil, exclusive of taxes ...	5.50-7.00
Motor benzine, including taxes ...	23.00-24.00
Benzine, doubly refined ...	25.00-26.00
Residuals in tank waggons, at refinery ...	3.60-3.80
Paraffin ...	120.00-125.00

PRICES FOR EXPORT.

Refined oil in tank waggons, per 100 kgs.	6.75-7.00
Benzine, sp. gr. 0.710-0.715 ...	20.00-21.00
„ sp. gr. 0.715-0.720 ...	19.00-20.00
„ sp. gr. 0.730-0.740 ...	15.00-15.50
„ sp. gr. 0.745-0.755 ...	12.00-13.00

Royal Portuguese Railway Company.

TENDERS ARE INVITED, at Lisbon, for the Supply of 360 Tons of Black Mineral Oil, up to 13th of January, 1908.

Full particulars may be obtained on application at the Company's Office, 28, rue de Châteaudun, Paris.

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IMPORTS of PETROLEUM into UNITED KINGDOM

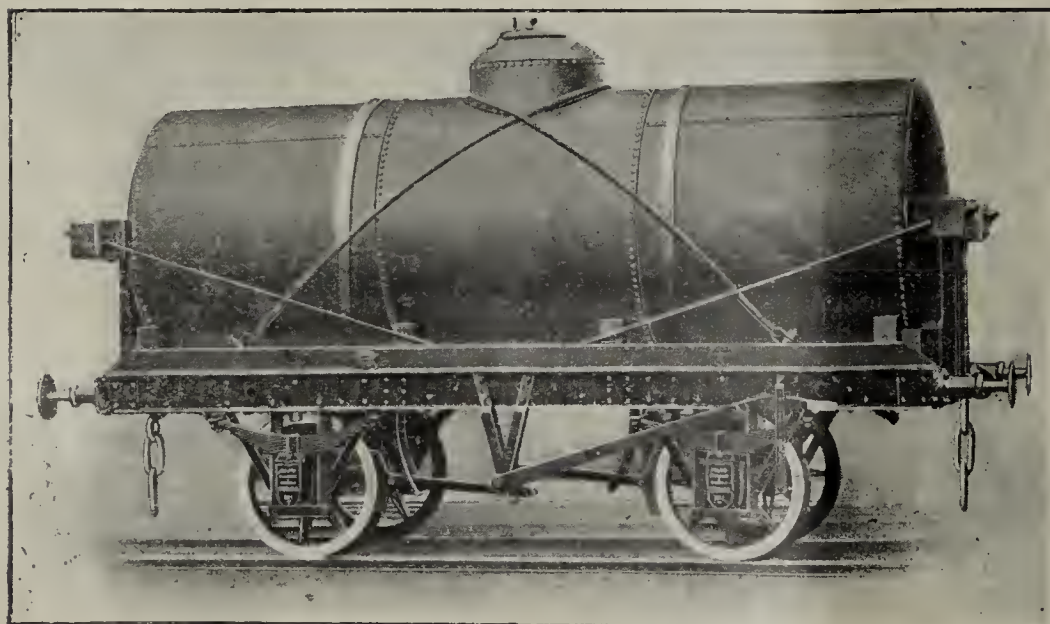
Specially prepared for .
this Journal by . . .
the Custom House.

FOR THE PERIOD FROM 17TH TO 21ST DECEMBER, 1907—

DATE.	PORT AND IMPORTERS.	DESCRIPTION.	NO. OF GALLS.	PORT WHENCE.
Dec. LONDON—				
17	Anglo-American Oil Co.	.. M.Colza	200	New York
17	"	.. Lub.	36,000	"
17	Langley, Smith and Co.	.. "	2,400	"
17	Fielder, Hickman and Co.	.. "	8,240	"
17	Produce Brokers' Co.	.. "	12,000	"
18	O. Gerdes Hansen and Co.	.. M.Colza	2,100	Philadel.
18	Union Lighterage Co.	.. Lub.	5,630	"
18	Mordaunt Bros.	.. Résid.	4,200	Trieste
19	"	.. Lub.	2,500	Philadel.
19	Worthington and Boler	.. "	2,400	"
19	Ocean Oil Co.	.. "	4,800	"
19	A. Brown and Co.	.. "	8,400	"
19	A. J. Hall	.. "	14,000	"
19	Anglo-American Oil Co.	.. "	44,200	"
19	British Petroleum Co.	Gas	1,253,000	"
(James Brand)				
19	Homelight Oil Co.	Lamp	525,350	Batoum
(Bloomfield)				
19	A. Brown and Co.	.. Lub.	2,080	Hamburg
19	T. H. Lee	.. "	290	"
19	Page, Son and East	.. "	440	Antwerp
19	R. Park and Co.	.. Lub.Gr.	150	Marseilles
20	London and India Docks Co.	Lub.	250	New York
20	Lubricating & Fuel Oils, Ltd.	"	14,760	Philadel.
20	Mordaunt Bros.	.. "	15,900	"
20	T. S. Harris and Co.	.. "	3,040	"
20	Bowring Petroleum Co.	.. "	8,830	"
20	Scott's Wharf	.. "	3,000	"
21	London and India Dock Co.	"	2,730	"
21	Anglo-American Oil Co.	Gas	566,000	"
(James Brand)				
21	J. Spurling	.. Lub.	280	New York
21	H. G. Thomas	.. Tar Oil	160	Stockholm
LIVERPOOL—				
17	W. B. Dick and Co.	.. Lub.	8,160	New York
17	Liverpool Storage Co.	.. "	131,160	"
17	"	.. M.Colza	18,000	"
17	Anglo-American Oil Co.	Lamp	784,500	Philadel.
(Cuyahoga)				
17	Pickfords, Ltd.	.. Lub.	370	Hamburg
18	Meade-King, Robinson & Co.	"	240,000	Batoum
(Erivan)				
18	Geo. B. Taylor	.. "	920	New York
21	Valvoline Oil Co.	.. "	6,360	"
21	Ismay, Imrie and Co.	.. Lub. Gr.	400	"
21	Meade-King, Robinson & Co.	Lub.	5,200	Baltimore
21	"	"	3,400	"
21	Crew, Levick and Co.	"	90	"
BRISTOL—				
17	Pickford's, Ltd.	.. "	430	Hamburg
19	E. Stock and Sons	.. "	2,000	"
21	W. Smith and Co.	.. "	19,000	New York

DATE	PORT AND IMPORTERS	DESCRIPTION.	NO. OF GALLS.	PORT WHENCE.
Dec.				
21	Ford and Canning	.. Lub.	2,700	New York
21	H. R. James and Sons	.. "	46,280	"
21	"	.. M.Colza	3,400	"
GRIMSBY—				
17	J. Sutcliffe and Son	.. Lub.	40	Hamburg
17	"	.. "	150	Antwerp
19	"	.. "	70	"
HULL—				
19	T. Wilson, Sons and Co.	.. "	4,400	New York
21	"	.. "	17,520	"
21	Wilsons and N.E. Railway Shipping Co.	"	380	Hamburg
21	Meade-King, Robinson & Co.	Naph.	20,000	Rotterdam
MANCHESTER—				
18	J. T. Fletcher and Co.	.. Lub.	320	Antwerp
18	G. B. Taylor	.. "	520	Hamburg
18	Manchester Liners	.. Lub.Gr.	400	Philadel.
18	Diamond Lubricating Co.	"	2,600	"
19	Anglo-American Oil Co.	Lamp	568,600	"
(Cuyahogo)				
19	"	Gas	271,350	"
19	Bramwell, Fern and Co.	Lub.	278,250	Batoum
(Erivan)				
19	Meade-King, Robinson & Co.	"	278,250	"
(Erivan)				
MIDDLESBRO'—				
17	Hanson, Brown & Co.	.. Naphtha	15,840	Rotterdam
20	J. J. Sutherland	.. Lub.	1,560	Antwerp
NEWCASTLE—				
19	Tyne-Tees S.S. Co.	.. "	160	Hamburg
SOUTHAMPTON—				
19	White Star Line	.. "	2,400	New York
SWANSEA—				
18	Burgess and Co.	.. L. Paste	200	Hamburg
DUNDEE—				
19	D. Alexander and Sons	.. Lub.	400	"
GLASGOW—				
17	Anchor Line	.. "	36,010	New York
17	Clyde Shipping Co.	.. Lub.Gr.	120	Antwerp
LEITH—				
19	G. Gibson and Co.	.. Lub.	2,000	"
19	J. Currie and Co.	.. "	1,240	Hamburg
19	Graham-Yool and Co.	.. Lamp	8,630	"
LIMERICK—				
18	British Pet. Co. (Rion)	.. "	793,000	Philadel.
Total for Period			6,120,110	

MIDLAND RY-CARRIAGE & WAGON CO., LTD.,

Midland Works,
BIRMINGHAM.

— BUILDERS OF —

**OIL AND OTHER
TANK WAGONS,**

And Every Description of Rolling Stock

**With WOOD or STEEL
UNDERFRAMES.**

PRATT'S MOTOR SPIRIT.

Absolutely PERFECT for

Motor Cars, Motor Cycles
and
Motor Boats.

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ANGLO'S .760 SPIRIT

For Heavy Vehicles and Steam Cars.

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 LONDON, E.C.

DEPOTS & AGENTS EVERYWHERE IN THE UNITED KINGDOM.

FOR THE PERIOD FROM 23RD TO 30TH DECEMBER, 1907—

DATE.	PORT AND IMPORTERS.	DESCRIPTION.	No. OF GALLS.	PORT WHENCE.
Dec.	LONDON—			
23	Argo Steamship Co.	Creosote	240	Bremen
23	Hugo Lorenzo	Lub.	200	Melbourne
23	Perkins and Homer	"	2,400	Philadel.
23	E. J. Walkenshaw	"	4,800	"
24	Mercantile Lighterage Co.	"	31,900	"
24	Anglo-American Oil Co.	"	1,200	"
24	" (Jas. Brand)	Gas	687,000	"
24	London and India Docks Co.	Lub.	3,810	Hamburg
24	Bryce and Rumpff	"	40	Bremen
24	H. Johnson, Sons and Co.	"	160	Antwerp
27	British Pet. Co. (Terek)	Lamp	667,900	Pt. Arthur
27	A. Brown and Co.	Lub.	400	Hamburg
27	T. H. Lee	"	240	"
27	Argo Steamship Co.	"	300	Bremen
28	A. C. Hitchcock	"	240	Dunkirk
30	Mordaunt Bros.	"	5,820	New York
30	Scott's Wharf	"	2,000	"
30	"	"	2,000	"
30	Anglo-American Oil Co. (Narragansett)	"	421,760	"
30	"	Lamp	2,508,110	"
30	Page, Son and East	Lub.	160	Antwerp
	LIVERPOOL—			
23	Pickford's	"	280	Hamburg
23	Stockdale and Doel	"	2,660	Boston
23	W. Gibson and Sons	Lamp	2,050	"
23	Huxley and Co.	Lub.	1,000	New York
23	Meade-King, Robinson & Co.	"	8,000	"
23	W. B. Dick and Co.	"	27,370	"
24	"	Lamp	1,930	"
23	Geo. B. Taylor	Lub.	6,000	"
23	Meade-King, Robinson & Co.	Lamp	21,100	Philadel.
23	W. B. Dick and Co.	Lub.	3,920	"
24	"	"	10,260	"
24	Worthington and Boler	"	6,000	"
24	Vacuum Oil Co.	"	42,160	New York
24	Penwarden and Jackson	"	250	Antwerp
24	P. Walmaley and Son	Lub. Gr.	50	"
27	J. T. Fletcher and Co.	Lub.	210	"
27	American Line	"	3,600	Philadel.
27	Uneco Asbestos Light Co.	Lub. Gr.	400	"
27	Crew, Levick and Co.	M. Colza	3,680	"
27	"	Lub.	33,200	"
27	Meade-King, Robinson & Co.	"	16,600	"
27	"	Lamp	20,500	"
27	Anglo-American Oil Co. (Ottawa)	Gas	552,890	"
27	G. B. Taylor	Lub.	1,000	New York
27	J. Light and Son	"	1,000	"
28	Meade-King, Robinson & Co.	Gas	253,000	Pt. Arthur
28	E. H. Kellogg and Co.	Lub.	240	Lisbon
30	Burnaby and Chantrell	L. Comp.	950	New York
30	Ismay, Imrie and Co.	Lub.	400	"
30	E. H. Kellogg and Co.	"	8,000	"
30	Stockdale and Doel	"	2,860	Boston
30	Meade-King, Robinson & Co.	"	16,700	Baltimore
30	"	"	4,000	"
30	"	"	2,000	Hamburg
30	Vacuum Oil Co.	Lub. Gr.	560	Stockholm
	BARROW—			
28	Anglo-American Oil Co. (Housatonic)	Naph.	624,580	Bengkalis
	BRISTOL—			
23	British Petroleum Co. (Cymbeline)	Lamp	1,680,000	New York
22	Pickford's, Ltd.	Lub.	1,100	Hamburg
23	H. R. James and Sons	"	1,200	New York

DATE, Dec.	PORT AND IMPORTER.	DESCRIPTION.	No. OF GALLS.	PORT WHENCE.
27	Heaton and Co.	Lub.	510	Antwerp
27	F. F. Fox and Co.	"	4,020	"
27	W. G. Clarke	"	1,200	"
30	Coulthurst and Harding	"	280	"
30	Pickfords	"	160	"
	GRIMSBY—			
23	J. Sutcliffe and Son	"	1,650	"
27	"	"	120	"
27	"	"	200	Hamburg
	HULL—			
23	Wilsons and N.E. Railway Shipping Co.	"	160	"
23	W. Gilyott and Co.	"	38,400	New York
23	T. Wilson, Sons and Co.	"	42,720	"
27	"	"	2,000	Riga
27	"	"	1,800	Drontheim
27	"	"	480	Copenhagen
27	Wilsons and N.E. Railway Shipping Co.	"	600	Antwerp
27	"	"	320	"
28	W. Gilyott and Co.	"	78,720	New York
	HARWICH—			
27	D. Howard	"	880	Antwerp
	MANCHESTER—			
23	Meade-King, Robinson & Co.	"	46,200	Philadel.
23	"	M. Colza	4,000	"
23	Liverpool Storage Co.	Lamp	2,400	"
23	Crew, Levick, and Co.	Lub.	15,560	"
23	George B. Taylor	"	77,000	"
23	Manchester Liners	"	11,560	"
27	Hy. Wells Oil Co.	"	2,800	"
27	J. T. Fletcher and Co.	"	530	Antwerp
27	Meade-King, Robinson & Co.	"	10,400	Hamburg
27	D. Currie and Co.	"	3,440	"
	NEWCASTLE—			
27	Tyne-Tees Steamship Co.	"	4,720	Antwerp
17	"	"	3,320	"
30	"	"	2,000	Hamburg
	STOCKTON—			
27	J. J. Sutherland	"	400	Antwerp
	SUNDERLAND—			
27	Homelight Oil Co. (Bloomfield)	Lamp	543,000	Batoum
27	Anglo-American Oil Co. (Potomac)	"	575,270	New York
	SWANSEA—			
30	Richards, Turpin and Co.	Lub.	4,800	"
	ABERDEEN—			
27	R. Connon, Reid and Co.	L. Paste	120	Hamburg
	GLASGOW—			
28	J. and A. Allan	Lub.	86,500	Philadel.
28	Clyde Shipping Co.	"	410	Antwerp
	GRANGEMOUTH—			
24	Hopkins, Paton and Co.	"	480	"
24	W. Graham-Yooll and Co.	Lamp	4,000	Hamburg
24	"	"	4,800	"
24	J. Currie and Co.	Lub.	2,000	"
27	"	"	2,800	"
27	W. Graham-Yooll and Co.	Lamp	4,720	"
	BELFAST—			
23	J. C. Pinkerton and Co.	L. Paste	60	"
23	"	Lub.	150	Antwerp
	Total for Period	"	9,290,040	
	Total for the Fortnight	"	15,410,150	
	Deduct to correct :—			
	LONDON—			
19/12	British Petroleum Co. (J. Brand)	Gas	1,253,000	Philadel.

Telegraphic Address:—"OLEINE."

Telephone Nos.:—{ 249 & 254 LIVERPOOL.
1990 MANCHESTER.

MEADE-KING, ROBINSON & Co.,

11, Old Hall Street, LIVERPOOL, & 18, Exchange Street, MANCHESTER,

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The Petroleum Review.

By PAUL DVORKOVITZ.

Vol. XVIII. (New Series.)

JANUARY 18TH, 1908.

No. 416.

Editorial Notes.

Activity in the Oil Tanker Trade. The year has opened with something like unprecedented activity prevailing in the oil tanker building trade. Owing to the great demand there is for tank steamers, work upon the various new boats has been proceeding at a forced rate, and in a few weeks a number of them will have been launched. As our readers are aware, the Anglo-American Oil Co. has already launched two of their new vessels, and others are shortly to leave the stocks. Messrs. H. E. Moss and Co. had a launch about the middle of December, and only yesterday a new oil tanker was launched for the Bowring Petroleum Co. from the Tyne stocks. Messrs. Lane and Macandrew, too, are pressing forward with the several boats now being built for them, and Captain Davis assures us that in a few weeks the first of this firm's new 7,000 ton tankers will be ready for launching. Quite a series of launches may be expected from the Tyne yards early in the summer, but for the present it is unnecessary to mention their respective owners.

Will the New Boats Tend to Lower Freights? The present activity in building new bulk oil carrying vessels is due to two main causes, one of which is the increased capacity necessary to meet the needs of the industry, and the other, the necessity to replace the several boats lost during the past year or two, or removed from active service. As the demand came in from all quarters at once for tanker accommodation, freights, as every oil man knows, rose by leaps and bounds, and we should imagine that last year was quite a record in this respect, for during the twelve months, freights trebled themselves, and even at the enhanced prices, there were more buyers than there were boats to charter. Then came the giving out of wholesale orders for the building of new vessels, and an early drop in oil freights was predicted. But not so. The recent destruction of some of the older class of oil tankers at sea has completely altered the aspect of the case. We have scarcely got through more than one-half of the first month of the year, yet 1908 has already witnessed the wrecking of two oil tankers—we refer to the "Housatonic" and the "Turbo." Elsewhere we briefly touch upon the disasters, and therefore only mention them here to shew that, after all, much of the new transport now being built will go to replace some of that recently destroyed, and not, as was generally anticipated, to afford facilities for the transport of much greater quantities of bulk oil cargoes. As a matter of fact, it seems highly probable that the situation will be but slightly changed when all the new tankers now building are off the stocks, and it is a foregone conclusion that freights will not quickly return to their old level.

Baku during 1907. It is too early to present many details concerning matters at the Baku oil fields during 1907, but one or two figures which we now publish should convey a pretty accurate idea of how the petroleum industry in the Caucasus has stood during the year recently closed. In the first place, the total production of the fields will shew a fairly substantial increase over that of 1906, for the figures will be in the region of 475,000,000 poods, as compared with 448,000,000 poods for 1906. The number of wells under exploitation during 1907 was greater than was the case the previous year, and, as shewing the restoration of peace throughout the fields, the number of days which the whole of the wells were in exploitation during the year was much in excess of the figures for 1906. During 1907 an effort was made to reach the 40,000,000 pood mark per month, and this was fairly successful, inasmuch as the monthly average during the year will work out at over 39.5 million poods, as against 37.3 million poods during each month in 1906. If, therefore, the present progress continues during 1908, it is safe to predict that the number of producing wells will rise to 2,300, and the output of crude oil for the present year should, if uninterrupted by strikes, etc., reach about 500,000,000 poods.

Retrospect of the American Petroleum Industry. America has made remarkable strides during 1907, and to-day its petroleum industry is of far greater commercial importance than has ever been the case. Its production for the past year is bound to reach over 160,000,000 barrels, or a gain of 30,000,000 barrels upon the total figures of the preceding year. The large amount of development work that has had to be accomplished to bring this about is not easily understood. The prolific territories known as the Mid-Continental field have more than doubled their production during the past twelve months, and to-day a large portion of this oil is being piped over 400 miles south to supply the refineries on the Mexican Gulf. The rise of the Illinois fields, whose production last year was five times as great as in 1906, stands as an example of what can be accomplished where the industry is backed up by a concern whose almost unlimited capital renders it possible to construct pipe lines and erect both storage and refining facilities wherever necessary. The far western fields of California, too, have their own story of progress to tell, for not only have the abnormal periods of recent years been passed through, but consequent upon this, the production is now being increased in all the fields, and a gain of 25 per cent. all round will be noticeable in the figures published elsewhere in this issue. Of the Pennsylvanian territories, despite continuous search for new producing areas, the total yield has decreased, but this inevitable decline in the older territories is more than counterbalanced by the bringing in of new localities whose production apparently knows no bounds.

WRECK OF THE OIL TANKERS "HOUSATONIC" AND "TURBO."

During the past few days, two of the English fleet of bulk oil carriers have been lost at sea. The Anglo-American Co.'s "Housatonic," while proceeding in water ballast from England to America, on Sunday, 5th inst., struck the Maiden Rock, near Larne, and became a total wreck, two of her crew being drowned.



Two days later, while nearing the end of her journey from Batoum to a Continental port, the oil tanker—"Turbo"—ran on to the wreck of the steamer "Serbia," near Haaks Point and broke in two, becoming a total wreck. The "Turbo," of which by kind permission of Captain Coundon, we are enabled to give a photograph, was formerly owned by the Shell Transport and Trading Co.

LONDON OIL SHARE MARKET.

FRIDAY, JANUARY 17TH, 1908.

We have another quiet week to report in connection with dealings in the Oil Share Group on the London Stock Exchange, although the further reduction in the Bank Rate, which was lowered yesterday to 5 per cent. is expected to result in a broadening out of general business.

Since our last issue the alterations consist of an improvement of 1s. per share in Shell Transport Ordinary to 43s. 6d. to 44s. 6d.; a shrinkage of $\frac{1}{4}$ per cent. in California Refineries to $\frac{1}{4}-\frac{3}{4}$, and an improvement of $\frac{1}{8}$ in Californian Oilfields to 6-6 $\frac{1}{4}$. Russian 5 $\frac{1}{2}$ per Cent. Debentures have been somewhat in demand, the price advancing first to 75-78, and then to 76-79, at which figure they continue firm. Shell Transport Preference have also been in request, rising to 9 $\frac{7}{8}$ -10 $\frac{1}{8}$, and subsequently improving to 10-10 $\frac{1}{4}$.

The only other alteration to note is in Baku Ordinary which have lost 3d. per share at 2s. to 2s. 6d.

At the first settlement for the year, which commenced on the 14th inst., rates of Contango for Oil Shares ruled at about 6 per cent. to 8 per cent., and a comparison of making-up prices with those fixed at the last settlement for the old year shews some little irregularity. Californian Oilfields at 6 shew a rise of $\frac{1}{4}$, Shell Transport Ordinary $\frac{1}{8}$ at 2 $\frac{3}{16}$, Russian Ordinary 6d. to 3s. 3d., and Preference 3d. at 4s. 3d. On the other hand, Schibaieff Ordinary have fallen 1s. 3d. at 1 $\frac{1}{4}$, Baku Preference 6d. at 45s., the Ordinary Shares 3d. at 2s. 3d., and Spies Petroleum 1 $\frac{1}{2}$ d. at $\frac{1}{8}$.

Schibaieff Ordinary at $\frac{1}{8}$, and Anglo-Russian Petroleum at 1s. are without change.

THE SURAKHANY OIL FIELD.

Owing to the exaggerated statements which have recently appeared in the St. Petersburg press respecting the Surakhany field and the recent spouter, the Baku Exchange Committee has sent a statement to the *Trade and Industry Gazette* setting out the facts regarding that field.

The productivity of the Surakhany field is represented by the fact that Mirzoeff Bros. are producing natural gas of a quantity equivalent to 15,000 poods to 20,000 poods of crude oil per day. The Baku Naphtha Co. produce gas equivalent to 10,000 poods of crude oil per day. The well of the Baku Naphtha Co., which has been spouting recently with a crude oil of a specific gravity of 0.827 for seven or eight days, became choked up with sand, and after this was cleared away it threw out only mud and water, and again became choked up. Apart from the above firms, there are working on the field, Nobel Bros., the Caspian and Black Sea Society, Benkendorf and Co., and several other firms, but the results of their work are still uncertain.

It is quite incorrect to speak of any boom in lands at Surakhany, as no sales of land for strictly industrial purposes have taken place recently.

THE DEVELOPMENT OF THE OIL FIELDS OF MEXICO.

REGISTRATION OF THE PRODUCERS' PETROLEUM COMPANY.

During the present week the Producers' Petroleum Co. has been registered in London with a capital of £200,000, divided into shares of £10 each. The object of the company is to carry on business of producers, refiners, storers, and suppliers of petroleum and its products, etc. The signatories are: Sir W. D. Pearson, Bart, M.P., 47, Parliament Street, S.W.; W. H. Pearson, M.P., 6, Richmond Terrace, S.W.; S. Mackew, 17, Berkeley Street, W.; J. Purdy, 47, Parliament Street, S.W.; R. M. Bird, 66, Ashley Gardens, Westminster; E. S. B. Maurice, 46, Parliament, Street, S.W.; H. H. Keddell, Langdale, Hutton, Brentwood (one share each). There are to be not less than three nor more than seven directors, the first being Sir W. D. Pearson, Bart., M.P., W. H. Pearson, M.P., S. Mackew, J. Purdy, and H. H. Keddell.

LATEST RUSSIAN NEWS.

According to telegraphic reports from Baku, the Russian Petroleum and Liquid Fuel Co. has lately been considerable buyers of crude oil. On January 13th, they bought three lots of 100,000 poods each for delivery in January (o.s.) at 25 $\frac{1}{4}$ copecs per pood.

A telegram dated January 13th, reports a spouter of considerable force on the Nobel property at Bebe-Aibat.

On Tuesday evening a bomb was thrown into the offices of the Caspian and Black Sea Society at Baku. Considerable damage was done, but the dynamitards got clear away.

THE PETROLEUM INDUSTRY DURING 1907.

A BRIEF RETROSPECT.

AMERICA.

It can with safety be said that never has such a memorable year been known in connection with the petroleum industry of the United States as was 1907. During the twelve months progress in many oil field regions was very rapid, and the total production of the whole of the fields may be taken at approximately 165,000,000 barrels, or an increase of about 35,000,000 barrels over that of the preceding year.

Dealing first with the conditions in and the production of the Appalachian fields—which embrace Pennsylvania, West Virginia, Kentucky and Tennessee, the Allegheny field, and South-Eastern Ohio—in spite of remarkable activity, brought about to a great extent by the good prices obtained for the crude product, the year's operations resulted in a falling off of production, the total figures being 25,000,000 barrels as against 27,000,000 barrels in 1906, and 29,800,000 barrels in 1905. During recent years, it will, therefore, be seen that the production from these high grade oil fields has been steadily declining, and had not the greatest activity been conspicuous in every field during the year, the falling off in the production would have been far more substantial. As we have mentioned over and over again in the REVIEW, as time goes on the difficulty of securing desirable territory is becoming increasingly apparent, and by constant drilling the wells found are only of very small compass.

The advance in price and also the obliteration of the colour line in classifying high grade petroleum, undoubtedly stimulated operations during the year. There were no less than 7,000 new wells drilled in the Appalachian fields during the year, and fully one quarter of these came in as dry holes. Pennsylvania ranks first in the number of wells drilled, being approximately one-half of the total, but in regard to production, West Virginia takes the foremost place, its production to-day being about 20,000 barrels.

In the Lima field, which includes the territories of North-west Ohio and Indiana, a general decrease in production was experienced in 1907. Many wells were drilled in, but these were in many cases dry holes, and in others the yield was far below that of the older wells. The total production was about 8,000,000 barrels, or about one-third what it was during 1906.

During the past year a very large development has occurred in the Mid-Continental field, of which our readers have been apprised from time to time. The oil development was confined almost entirely to the Indian Territory, though a large supply of gas was developed in Kansas. Likewise the total oil production in the Mid-Continental field was produced very largely by Oklahoma.

The most remarkable developments during 1907, says Mr. E. Haworth, Kansas State Geologist, were in the Glenn pool, located about ten miles south of Tulsa, Oklahoma. Here a number of wells with an initial

capacity close to 2,000 barrels per day have been developed, and also many others producing more than 1,000 barrels per day. The Glenn, therefore, is the most remarkable pool yet developed in the Mid-Continental field. How long it will continue to be so productive, of course, no one can tell, but it is certainly one of the greatest oil fields ever developed in America.

About the middle of the year, considerable excitement was caused by finding oil near the new town of Morris, 30 miles south from the Glenn pool toward Ardmore; a few good wells were obtained, but not much drilling had been done before a number of dry wells were obtained, a fact which checked development.

A nice field has been developed along Hog Shooter creek, from 6 to 15 miles south-east of Bartlesville. Late in 1906 a well was drilled and plugged; then a report was given out that the well was abandoned. But the company that drilled the well soon began to acquire other leases; the suspicion of others was aroused, and a miniature boom resulted. In a short time a number of different companies were drilling on different leases, and a nice group of oil wells and gas wells were developed; the larger of the oil wells have a capacity of about 500 barrels oil per day, and the gas wells from 5,000,000 to 15,000,000 cubic feet of gas.

During the first half of December what appears to be a possible repetition of the Glenn pool was developed in the north-east part of Osage reservation, only a few miles west of Dewey, the largest well being on lot 32. Previously, the Dewey-Copan field was limited on the west by a number of dry wells. These checked developments in a westward direction, but someone finally grew bold enough to go a few miles farther west, with the results described. It is reported that one well has been obtained equal, if not greater, than the biggest well of the Glenn pool.

The districts, productive at the close of 1906, remained equally productive during 1907. The shallow field in the Alluwee-Chelsea district has sustained its production, although but few new wells have been brought in, especially since the middle of the year.

This is also true with reference to the Dewey field, the Bartlesville field, and practically all the others. A good healthy activity prevails, but developments have been confined principally to pools already opened up.

A number of different rulings were given out by the Secretary of the Interior; some of these stimulated development, but the greater number had the opposite effect. During October a series of rulings were made regarding oil royalties, gas royalties, and the transfer of leases; these rulings were so objectionable to operators that development work was practically stopped. The royalties in many instances were increased, and in some other ways restrictions were enforced which were very objectionable to the operators.

In the Texas and Louisiana districts the operations during the past year produced nothing of more than ordinary interest until November, when, as our readers will recollect, the first gusher was brought in at Anse la Butte in Louisiana. Coming, however, as it did so late in the year it had little effect in swelling the year's totals, which will shew a decrease when compared with the output during 1906. So far as we can at present judge, the total decrease will be about 1,500,000 barrels, the yield being 18,000,000 barrels. During the year operations in the Texas oil districts have proceeded very steadily, and here the total output for the past year will be something like 1,000,000 barrels in excess of what it was in 1906. On the other hand, there has been a great decline in the output from the Louisiana field, and until the Anse la Butte territory came forward the oil yield from this part of the Gulf fields was very small indeed.

Commercial conditions have doubtless assisted most materially to increasing operations in the Gulf coastal territory during the past year. The year opened with a firm market, and this increased as the year went on, until August, when crude oil changed hands at \$1 per barrel. Then came a change which tended to bring about a continuous drop in crude quotations. It will be remembered that in order to obtain an adequate supply of crude suitable for refining purposes, and at a price lower than that ruling in Texas, both the Gulf Refining Co. and the Texas Co., operating their refineries at Port Arthur, decided to construct trunk pipe lines into the Mid-Continent fields. The line of the Gulf Co. runs north from Sour Lake to Tulsa, a distance of 415 miles, and was completed in six months. It is eight inch in diameter, and has a capacity for 25,000 barrels. From Sour Lake to Port Arthur the company has two six-inch lines. The completed line was only put into operation during the closing months of the year, but rail shipments of Mid-Continent crude were made from the beginning of the year, and increased each succeeding month.

The line owned by the Texas Co. runs from the Glenn field via Dallas to Humble, where it connects with another pipe line to Port Arthur. Though it has not been in operation yet throughout its entire length, the northern portion of it has been utilised for a number of months, and crude is piped to Dallas and there stored. To-day, therefore, the Texas refineries are consuming large quantities of Mid-Continent crude, and this is one of the main causes of the termination of the period of abnormally high prices.

In the Texas districts, though wildcat operations were very numerous and were conducted in many counties, they did not open out any new territory of importance, and while operations were active in the old gusher fields, nearly all the new wells were in proved territory. Humble led in field work, followed by Batson, Sour Lake and Saratoga. In the case of Humble, the finding of a new sand at a depth of 1,170 feet, enabled it to lead the Texas districts in production, but its output was far below that of 1906.

In the petroleum fields of Illinois, the year just closed has been one of marked prosperity. The productive

area was considerably extended in many directions, and new and lower sands were tapped, while additional pipe lines were laid and a new refinery built. At the commencement of last year there were approximately 4,000 producing wells in the territory, but now the number has been more than doubled. The total production of the field in 1906 was in the region of 5,000,000 barrels, but so great have been the developments since, and so successful have been the operations, that for the past year the production may be taken to have been about 25,000,000 barrels. The pipe line system has been brought thoroughly up to date during the year, and now, collecting mains extend from north to south, throughout the entire length of the field, these joining the new pipe line running westward to the Standard's recently completed refinery at Alton.

This brief retrospect would not be complete if we did not refer in it to the vexatious legislative and judicial proceedings which the year has witnessed against the Standard Oil Co. and other corporations engaged in the petroleum industry. The several prosecutions have done a great deal to injure the refining and distributing interests against which they were directed. In view of these actions it should be noted that there are, and have been for several years, large independent refineries at Port Arthur and other places which have been operated steadily and successfully in competition with the Standard Oil Co.

Our contemporary, the *American Engineering and Mining Journal*, quotes a portion of the findings of the Commissioner of Corporations—Mr. Herbert Knox Smith—who says in speaking of the crude oil market, "in the coastal oil field, the price of crude seems to be determined by genuine competition, and regulated solely by the law of supply and demand."

With regard to California, we intend to touch upon the progress of these fields at length in our next issue. But as shewing the great activity that has there prevailed during 1907, we may mention that the production has increased quite 25 per cent. upon the figures of 1906.

The following table summarises the production during the year in America's various fields, and compares the results with those of 1906:—

Field.		1906.	1907.
		(In barrels of 42 gallons.)	
Gulf	California	30,538,000	40,000,000
	Colorado	600,000	350,000
	Texas	12,666,000	13,250,000
	Louisiana	7,100,000	4,925,000
	Illinois	4,900,000	25,000,000
Lima	Indiana	25,680,000	8,030,000
	Ohio		
	Mid-Continental ..	21,929,900	47,556,000
	Ken.-Tennessee ..	1,000,000	1,250,006
	Appalachian	27,345,600	25,500,000
	Wyoming	13,000	13,000
	Others	4,000	3,000
Total		131,771,500	165,877,000

Batoum Shipments.—The following were the shipments of various petroleum products during the week ended December 22:—

	Illuminating Oil.		Other Products.	
	1906.	1907.	1906.	1907.
To Europe ..	452,000	—	197,000	144,000
To the East ..	184,000	260,000	1,000	—
To Russian Ports.	210,000	109,000	2,000	—
From 1st Jan. to 22nd Dec. :—				
To Europe ..	11,782,000	14,119,000	8,721,000	9,701,000
To the East ..	8,116,000	11,729,000	61,000	358,000
To Russian Ports	3,324,000	2,280,000	254,000	196,000

THE APPLICATION OF PETROLEUM TO AERIAL NAVIGATION.

IMPORTANT PAPER BY H. DEUTSCH.

The successful flight made the other day by Mr. Henry Farman upon his new aeroplane at Paris, has turned public attention again to the subject of aerial navigation. At the *dejeuner* given to Mr. Farman at the French Automobile Club, last Monday, a very interesting speech was made by M. Henri Deutsch, a gentleman occupying a most important position amongst the French petroleum refining interests, who was one of the most ardent workers in connection with the first Petroleum Congress held in Paris in 1900. During that International Congress, M. Deutsch proved his great interest in aerial navigation by delivering a paper upon the subject, and in view of the added interest which now attaches to the problem, we have pleasure in publishing that paper *in extenso*, having taken it from the special supplement of our journal published on September 8th, 1900.

The paper presented by M. Deutsch was as under:—

We are here assembled in the name of a divinity whom we hold dear—Petroleum, whose benefits are innumerable. After having lighted, heated, and furnished motive power for the world, it aspires to a still higher rôle, namely, to carry us through the upper air!

Those who, like myself, have followed the progress of the petroleum industry for forty years, have witnessed the developments in human activity assured by the utilisation of this product.

It was formerly said that the horse represented the finest conquest made by man; to-day one may affirm that petroleum will be one of the greatest conquests of the age.

You all know the success that has been obtained in these past few years by automobile road traction since the employment of petroleum motors.

Some years before the exhibition of 1889, where I had the honour of exhibiting the first petroleum motors—in the place where you are now sitting—I had the idea that such motors could be successfully applied to aerial navigation, and I recollect having been in negotiation with a constructor whom I commissioned to investigate, in conjunction with Commandants Renard and Krebs, of the Meudon Aerostat Works, a light motor for trials in the matter of aerial propulsion.

These constructors, however, were not ready, and the motors were still too heavy; consequently Messrs. Renard and Krebs had to turn their attention to electricity, and made their interesting trials at Meudon with an electro-motor. Practical experience has shewn later that electricity is not the motive power of the future for this purpose, because the use of this form of energy entails accumulators so heavy as to be impracticable for aerial locomotion. Petroleum does not exhibit this inconvenience to the same extent, being itself a source of energy, of which it contains a considerable amount in a very small compass (low weight), its utilisation being of the simplest and easiest possible, on account of its liquid condition, its ready vapourisation and combustion; in a word, it is the most perfect form of energy imaginable, storing as it does a maximum of power in minimum bulk.

It is, therefore, to petroleum, and mainly petroleum spirit, that the honour of solving the problem of aerial propulsion is reserved.

To give some idea, to those of you who have not closely followed the matter, of the energy contained in petroleum, I may tell you that two litres of petroleum spirit contain sufficient energy to lift the Eiffel tower a distance of two metres from the ground.

The prodigious power and speed that can be developed by existing motors with such a small quantity of petroleum is astonishing. With 150 grms. per kilometre one can drive a 28 h.p. carriage; *i.e.*, 40 litres of oil suffice for 200 kilometres.

You will be able to judge on the occasion of the projected automobile excursion to Rouen what results are attainable with such engines, and you will perceive, like myself, what may be hoped for in the future.

To return to my subject, allow me to give expression to several desires and to lay before you my personal impression on the much-disputed question of aerial navigation.

For a number of years I have pursued the subject with ardour. I have always held the view that aerial navigation is not a mere

chimera, and that, by combined effort, a solution would be obtained.

Flight, pure and simple, has been condemned by the results of many experiments. I, myself, have performed several which seem to indicate that the mixed system of steerable balloons and propelling flyers might lead to valuable results. On this subject I have made several experiments on the ascensional power of certain birds, taking an ordinary pigeon as the type and regarding all its organs as propellers, the body as motor and the wings as ascensional and propulsive forces.

The average weight of the pigeon's body is 380 grms.; the average weight of the pigeons wings is 50 grms.

The surface of the extended wings is about 60 sq. centimetres. A pigeon can lift an extra weight of 50 grms., or 15 per cent. of its own total weight. To simplify the calculation let us take three pigeons as being equal to one kilogramme, without the wings, and as corresponding to 180 sq. centimetres of wing surface, and as capable of lifting an additional weight of 150 grms.

Assuming a weight of 100 kilos., a man, for instance—equivalent, as a motor, to 300 pigeons—could only lift 15 kilos. and would require 182 square metres of wing surface, *i.e.*, about twice the superficial area of this hall. The 15 additional kilos. are in excess of the man's own weight and would hardly cover the weight of the accessory organs indispensable for propulsion.

If we pursue the comparison still further we shall see that a 200 to 300 kilo. motor would require a wing surface of 360 to 542 square metres to lift its own weight, assuming the above-named proportions to be maintained, since, though not very exact, they enable an account to be taken of the insurmountable difficulties in the way of flight *per se*.

It is, therefore, essential to diminish the dead weight to be lifted, that of the motor itself, since, as you know, the power of ascension increases in inverse ratio to this weight.

A body laid on the surface of water will fall to the bottom, whether inert or motile, and in the latter event it is unable to act usefully. But if provided with a kind of life-belt, such as a gaseous envelope or float, it will be kept on the surface, and will then be able to act and perform the motions necessary to propulsion; consequently in virtue of its appropriate organs this motive body will be steerable.

Now, that which occurs in water is identical with what happens in a medium like air. A body kept in a state of equilibrium in the atmosphere is able to move about without, as it were, taking any trouble about its own weight.

Existing motors, being still too heavy, must be provided with a kind of life-belt or gaseous envelope to enable them to remain in suspension in the air. Their weight being thus reduced, they are able to produce movements, the utilisation of which will be better effected in proportion as the factor of weight falls out of consideration.

My view, therefore, is that all the experiments made in the direction of aerial navigation should be voted to this end, *i.e.*, that endeavours should be made to reduce to a minimum the weight of the very powerful motors already available, and to furnish them with an envelope, or rather a float, which will enable them to keep afloat in the air, where they can then develop motive force.

Evidently the choice of a float for this purpose should fall on the type shewing the most advantages. The classic spherical type of balloon has already been abandoned, because the motor, having to be placed in the car, is required to move the float under unfavourable conditions. Moreover, the typical balloon merely filled with light gas was not designed with a view to movement by horizontal displacement, whether in respect of the application of a motor or of steering gear.

Among the forms, apparently the best, and recognised as such by many inventors—*inter alia* Renard and Krebs, Count Zeppelin, and M. Santos Dumont—may be classed the cigar-shaped balloon, this being the best calculated to reduce to a minimum the resistance of the air, and being apparently superior to all others in point of horizontal stability.

Apart from the shape of the envelope, the nature of this appliance plays an important part. Perhaps textile materials may be replaced for this purpose by soldered metallic envelopes made of light metal, such as aluminium, or better still, gallium, containing gases lighter than air—hydrogen or coal gas.

These metallic envelopes would have the advantage that they could be intimately affixed to the motor and form a whole which

would be very difficult to force out of shape—a quality not possessed by the appliances fitted with textile coverings hitherto in use.

In fine, the provision of an envelope of suitable shape and nature does not appear to present any insurmountable difficulties; and I believe that those who have pursued their experiments in the aforesaid direction—viz., that of metallic or textile envelopes, connected to the motor and steering organs—will alone succeed in overcoming many difficulties now encountered.

At the present moment M. Santos Dumont is making trials in the environs of Paris with a 7 h.p. motor and a screw 3 metres in diameter. It is probable that the experience gained under these conditions will furnish certain useful indications relative to the resistance of the air and the stability of the whole. Perhaps it will succeed in gaining the prize offered by myself.

There still remains the question of the motor specially designed with a view to reducing the weight per horse-power. This point has been placed beyond doubt; the reduction in weight already achieved has surpassed all the expectations of ten years back.

Messrs. Daimler, of Cannstadt, have designed a motor of magnolia metal, which is lighter than aluminium, the cylinders alone being of steel. This motor weighs only 5 kilos. per h.p.

Messrs. Mors, of Paris, are now studying a motor, the principal organs of which are in aluminium and which will weigh only 4 kilos. per h.p.

It is evident that on these practical foundations, already established, the conditions of the problem of aerial navigation become more simplified and precise.

Finally, there is the question of the quality of the petroleum hydrocarbons necessary for the production of the explosive mixture.

In the author's works the attempt has been, from the outset, to discover out of the series of light petroleum oils the most suitable one to use. We have endeavoured to find out which of the hydrocarbons are best calculated to increase the force of the explosion effected in the motor, *i.e.*, those whose sum of energy is greatest per unit of weight, and those leaving behind a minimum of residue after ignition. Carbonaceous residues are, in fact, a source of inconvenience to the running of the engine, and if it were possible to employ none but products approximating to pure liquid hydrogen, and to produce the explosive mixture by the aid of oxygen, then the effective power developed would be certainly much higher than is now attainable.

Finally, there arises the question of the construction of the propellers. This is in the domain of mechanics, as is also the construction of the motor; and in this connection also I believe that important indicator trials are now being made at Lake Constance and at the Longchamps aerostat grounds, as has already been done at Chalais, so that I hope you will be able within a few days to learn what will have been done in the trials put down for 15-20 September.

The few observations and considerations I have been able to lay before you will afford very slight aid to the new researches which could be instigated for solving the problem that man is always setting himself in his combat against Nature, namely, how to rise above the surface of the earth and imitate those creatures which have the power of moving at their ease in a medium other than ours.

However, the conviction present in my mind that the problem of aerial navigation may be solved by the aid of the propulsive force of that liquid unknown to our grandfathers—petroleum—led me to seize the fortunate occasion of our reunion at this Congress to, with your kind indulgence, exchange these ideas on the subject of the future, and on this new utilisation of the product which has such vivid interest for us all. If, after the efforts we have made to discover it in the bosom of the earth and raise it to the surface in order to spread its benefits abroad, we should succeed in making it our auxiliary in lifting ourselves above the ground and making our way through the air, we shall have contributed to add to its terrestrial glories a new glory, which I may term celestial, and shall, therefore, be able to pride ourselves on its benefits and share its triumph.

I, therefore, invite you, gentlemen, to a new Congress five years ahead, and I trust that before that time arrives you may, if our lives are providentially spared, find your way here from all quarters of the globe, not by boat, railway or automobile, but by the aid of aerial machines, which will be for you as a foretaste of the skies.

The president thanked M. Deutsch for his interesting paper, and wished him every success in his investigations into aerial navigation.

In reply to a question as to the specific gravity of the oil which, in M. Deutsch's opinion, was most suitable for this purpose, the author said that, up to the present, petroleum essence having a specific gravity of from .680 to .700. American petroleum was the most used for motor purposes, but he thought the same results might be expected from Roumanian, Galician, and also from the petroleum of Borneo, Sumatra, &c.

THE RUSSIAN RAILWAYS AND LIQUID FUEL.

In view of the decision of the conference which was recently held at the Ministry of Commerce and Industry to use the oil which the Government has to receive as royalties from the lessees of the State petroliferous lands for supplying the needs of the State railways in liquid fuel, the *Trade and Industry Gazette* deals with some figures to illustrate the importance of this decision.

The recently-published official review of the Baku petroleum industry for 1906 shews that on the Government plots leased for a royalty in the form of a share in the production there were produced in 1906—103,763,622 poods of crude oil, of which there were delivered from the fields 97,944,816 poods, the difference representing loss and fuel consumption at the wells. The average royalty payable on these plots was 34.9 per cent. Thus, if the Government had taken its royalty in kind, it would have received 27,982,740 poods. Even if the production had been restricted to the obligatory minimum, which on these plots is 63,648,767 poods, the Government royalty would have represented 19,400,000 poods. Against these it is interesting to place the figures of the consumption of liquid fuel by the State railways. Unfortunately those for 1906 are not yet available, but in the preceding years the State railways consumed: in 1903, 55,400,000 poods; 1904, 62,000,000 poods; and in 1905, 57,000,000 poods.

According to official statistics the quantity of coal consumed by the Russian State railways in 1906 in place of liquid fuel amounted to 42,100,000 poods, which is equal to 30,000,000 poods of oil fuel. Bearing in mind that the consumption of liquid fuel is divided about equally between the State and private railways, the quantity of oil fuel displaced by coal on the State railways in 1906 may be taken at 15,000,000 poods. Taking as a basis the 57,000,000 poods consumed by the State railways in 1905, it is safe to assume that the consumption in 1906 was between 40,000,000 poods and 42,000,000 poods.

The above figures clearly shew that the quantity of oil which the Government can receive in royalties from the above mentioned is quite insufficient to cover the requirements of the State railways in liquid fuel.

There are, however, the plots leased out by auction on the 1st November, 1906, the concessions on which have not yet been ratified. These concessions, if definitely confirmed, involve a minimum obligatory output of 34,500,000 poods, and an average royalty of 57.44 per cent., which if taken in kind would yield to the Government a further 20,900,000 poods of crude oil.

THE MINERAL RESOURCES OF OKLAHOMA.

By DR. CHAS. N. GOULD, Professor of Geology, Oklahoma State University.

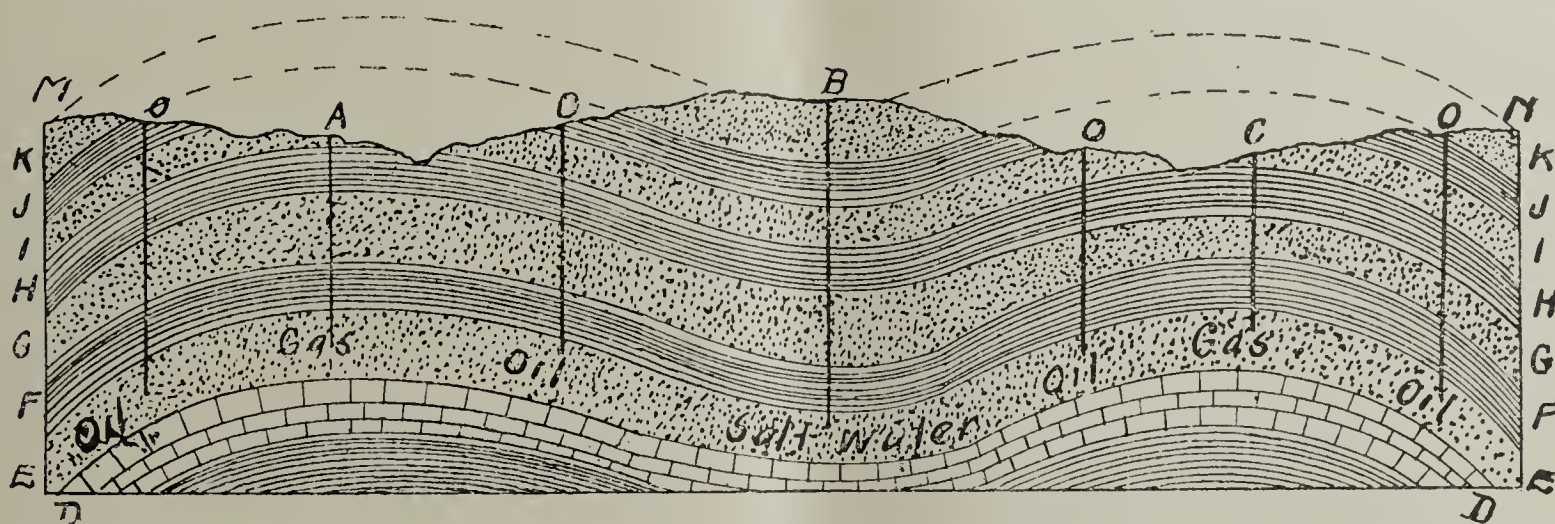
Writing specially for the *Manufacturers' Record*, Dr. Chas. N. Gould gives a most interesting article upon the mineral resources of Oklahoma. He says that the Oklahoma oil field has been developed gradually southward from Kansas. As early as 1882 drillers had discovered small quantities of gas in that State, but it was not until 1893 and 1894 that anything like extensive operations began. Oil having been found in the southern counties of Kansas, the drillers began to venture across the line into the Cherokee and Osage Nations. For the past ten years the drillers have been slowly and cautiously working south, until at the present time they have reached several points 75 to 100 miles south of the Kansas line.

The greater part of the development in Oklahoma has been in three general regions. Probably more than two-thirds of all the oil produced in this State has been found along the line of the ninety-sixth meridian, which is the dividing line between Cherokee and the Osage

Nation, west of the ninety-sixth meridian and between that line and the Cleveland field, both oil and gas have been found. At Wheeler, some 20 miles north-west of Ardmore, in Southern Oklahoma, a number of wells have been drilled which are reported to produce oil in paying quantities. Both oil and gas have been secured in small quantities at Gotebo, a town north of the Wichita mountains, in the south-western part of the State. The same is true at Lawton and Granite.

Gas has been found in practically all regions where oil is produced, and in addition at or near Chelsea, Wagoner, Ponca City, Blackwell, Pawhuska, Bald Hill and several other localities, sometimes in paying quantities, sometimes in small amounts. The amount of gas varies greatly in the different regions. Wells yielding 5,000,000 to 10,000,000 cubic feet a day are common, and a few wells are reported to yield as much as 60,000,000 cubic feet daily.

The depth to the oil sand varies in different localities.



Nations. Wells drilled within a few miles east or west of this meridian line have almost invariably found large quantities of oil or gas. In Kansas the wells at Caney and Peru are located near this line. The most prominent fields along the ninety-sixth meridian in Oklahoma are those at or near Copan, Dewey, Bartlesville, Ramona, Skiatook, Tulsa, Red Fork, and the now famous Glenn pool.

A second oil-producing region lies 25 miles or more east of the ninety-sixth meridian, just east of the Verdigris river. This is usually known as the Coody's Bluff-Alluwe field. The area of the proved territory extends for 25 miles north and south, and is six to ten miles wide.

The third productive region is at Cleveland, some 25 miles west of the ninety-sixth meridian. The Cleveland field is small, not occupying more than half-a-dozen square miles, but it has produced a large amount of oil.

Besides the three regions just discussed, there are several localities in other parts of Oklahoma which have produced small quantities of oil or gas. A field near Morris, eight miles east of Okmulgee, which has been developed within the past year, shews promise of becoming a prolific pool. A number of good wells have been found near Muskogee. In various parts of the Osage

The shallowest wells are those in the Coody's Bluff-Alluwe region east of the Verdigris, where the average depth is about 600 feet. Farther west, near Bartlesville, wells are 1,000 to 1,200 feet deep. Near Tulsa and in the Glenn pool the greater part of the oil and gas is found at a depth of 1,500 to 1,700 feet. At Cleveland, the oil is found in a higher sand than at Bartlesville or Tulsa, but the depth is approximately the same as in these localities.

The greater part of the oil produced in Oklahoma is sold to the Standard Oil Co. or one of its numerous branches. There are a few small refineries in Oklahoma and Kansas but most of the oil is carried by three pipe lines to the coast. One line runs north through the Kansas field, past Chicago and the Indiana field to the Atlantic coast. Two pipe lines run south from the Glenn pool to the Beaumont field and Port Arthur. In addition to the oil transported by pipe lines, a considerable amount is carried in tank cars, and a number of train-loads of oil leave the various fields each day.

It is impossible to even approximate with accuracy the amount of oil produced in Oklahoma, for the reason that all the oil from the Mid-Continent field, which includes both Kansas and Oklahoma, is grouped together. It may be of interest, however, to cite the following

statistics for 1906: During that year the amount of petroleum produced in the world was, in round numbers, 214,000,000 barrels, of which 126,000,000 barrels were produced in the United States. The Mid-Continent field produced 22,000,000 barrels. It may be safe to estimate that two-thirds of this amount came from Oklahoma, and the production of the State for 1907 is perhaps a third to a half more than in 1906. In October, 1907, the Mid-Continent field produced 4,850,000 barrels of oil, and during the same month 467 new wells were completed in Oklahoma, which produced 46,658 barrels of oil daily.

There is no connection whatever between the oil of the Mid-Continent field and that found in other parts of the United States, notwithstanding the fact that the statement is sometimes made that if the Oklahoma oil field were raced far enough south it would finally connect with the Corsicana or Beaumont fields of Texas. This is a geological impossibility. Oil and gas occur in rocks of all ages, from those which are very old to the most recent. The oil and gas from the Mid-Continent field, which includes Southern Kansas, Eastern Oklahoma, and the Fort Smith (Ark.) region, is found in rocks of carboniferous age, sometimes known as the coal measures. The greater part of the oil from Pennsylvania and West Virginia comes from rocks a little older than the rocks which contain the oil in Oklahoma. The oil from Western Ohio and Indiana comes from a very much older rock, known as the Trenton limestone. On the other hand, the Corsicana (Texas) oil is contained in upper cretaceous rocks which were deposited at a much later date than either the Trenton or carboniferous. The oil at Beaumont (Texas) and at Los Angeles (Cal.) comes from a series of rocks still younger, known as the tertiary. To state the matter in another way, the Corsicana oil comes from formations perhaps 20,000 feet higher in the geological scale than the oil in the Mid-Continent field, and the oil from Beaumont from rocks 10,000 feet higher than the Corsicana oil.

Geologists the world over are agreed that oil and gas are usually found in regions where four essential conditions of stratigraphy and structure are present. Whether the original source of petroleum is chemical or organic (and most geologists now accept the organic theory), experience has demonstrated that by far the greater part of all the oil and gas so far obtained in any part of the world has been secured in those localities where these four essential conditions occur, viz.: First, a rock forming a source of supply, from which the hydrocarbons have been slowly distilled; second, a reservoir rock or porous stratum, usually a coarse sandstone, which retains the substances; third, a cap rock, or impervious stratum, usually a dense shale, through which the oil and gas cannot pass, and lastly, an upfold or anticline in the rocks, under which the oil and gas may accumulate.

These conditions may be illustrated in the accompanying diagram (Fig. 1), which is intended to shew a portion of the earth's crust consisting of alternating strata of rocks which have been folded, shewing anticlines at A and C, and an intermediate downfold or syncline at B.

The figure is also drawn indicating that the top of the anticlines have been worn away by erosion along the line MN, leaving the syncline standing as a ridge. D is a rock containing fossils, the source of supply. E is a porous sandstone forming the reservoir, and F an impervious shale cap rock. If both oil and gas are distilled from the rock D and ascend into the porous sandstone stratum E contained under the impervious shale F, and if salt water is also found in the sandstone, then it naturally follows that the gas, being the lightest of the three substances, will tend to ascend to the highest possible level, and will collect under the summit of the anticline. Following the law of gravity, the salt water, which is the heaviest of the three substances, will sink down to the trough or syncline. The oil will usually be found along the slopes of the fold between the anticlines and the syncline. The relative location of the three substances of the reservoir is represented in the diagram. It has been found, by experience in many regions, that if oil is desired wells should be drilled at O, intermediate between the summit of the arch and the lowest point of the trough. Gas will most probably be found at A and C. No drilling should be done in the syncline at B unless salt water is desired.

This, in brief, is the anticlinal theory of oil and gas formation. No one believes that the theory is infallible, for sometimes neither oil nor gas is found in regions where surface conditions appear favourable, and, on the other hand, a few oil and gas wells have been found in synclines. The fact remains, however, that careful investigations in a number of widely separated fields not only in the United States, but in other parts of the world, has shewn that by far the greater part of the prolific oil and gas wells are found along anticline folds.

This condition of stratigraphy and structure is present in Oklahoma. The greater part of all the oil and gas so far found in the State, perhaps nine-tenths in all, occurs along anticlines. It is a notable fact that a well-marked anticline extends for 75 miles north and south along the line of the ninety-sixth meridian, from Kansas to an unknown distance south of the Glenn pool. Another prominent anticline is found at Coody's Bluff, and there is good reason for believing that there is a low, broad arch in the Cleveland region also, although the structure is here more obscure, and has not yet been definitely worked out.

The fact of great importance, however, is that anticlines, similar to those where oil has been produced, occur in many parts of the State where no drilling has yet been done. The rocks in the southern part of what was formerly the Creek Nation, as well as the northern part of the Choctaw and the south-eastern part of the old Cherokee Nation, are known to be folded into a series of great anticlines and synclines, but practically no prospecting has been done in these regions. There are no reasons, judging from a geologic standpoint, why these areas should not contain as large deposits of oil and gas as the regions that have already been developed farther north.

(To be concluded.)

MEXICAN PETROLEUM DEVELOPMENTS.

Our well-informed American contemporary, the *Oil, Paint and Drug Reporter*, has a most interesting article in its current issue dealing with the petroleum developments in Mexico. Writing from Mexico City their correspondent says that the development of the oil field at Minatitlan, on the Isthmus of Tehuantepec, by Messrs. S. Pearson and Son, of London, who are operating the Tehuantepec National Railroad under a fifty-one years' lease from the Mexican Government, is being conducted on an extensive scale. It is announced that the new oil refinery which the firm is erecting at Minatitlan will be finished and placed in operation in about three months. Its capacity is not made public, but more than \$2,000,000 is being expended in its construction. The firm is also installing many other important improvements at the oil field, including a modern central pumping plant, an electric light and power plant, machine shops complete telephone system and steel storage tanks. There are to be forty of these storage tanks of large capacity. It is stated that twenty of them have been finished, and are being filled with oil from the wells, and that the remainder are being erected as fast as the construction material arrives from England.

Messrs. S. Pearson and Son have also built a railroad from a point on the Tehuantepec National Railroad to the oil field a distance of twelve miles. This road is in regular operation, and is used to transport oil out of the field. All of the locomotives on the Tehuantepec National are equipped with oil burners, and receive their supply of fuel from this field. The number of producing wells in the Minatitlan field is not publicly known. Many of

them are said to be capped pending the completion of the big refinery, when their product can be used to best advantage. The work of boring new wells is being carried on steadily, and the results are said to be highly satisfactory. A great body of land, not only covering the proved oil field, but extending all around it for a great distance, is in control of Messrs. S. Pearson and Son, and they have full possession of the field, both actual and prospective. They have been quietly operating in the Minatitlan district for three or four years. The officers and employes will give out no particulars of the operations, and what information is obtainable comes through Government channels, and is obtained through official reports made by the firm to the Government authorities. This data is very general in character. It is claimed by the few expert American oil men who have visited that section of the Isthmus of Tehuantepec that the prospects are favourable for the development there of one of the greatest producing oil fields on the continent. These prospective investors found that all the land which shewed favourable oil indications was already in possession of Messrs. S. Pearson and Son.

The Mexican Petroleum Co. is enlarging its oil operations at Ebano, State of Tamaulipas. It is stated that its refinery is kept in regular operation and that a number of new producing wells were recently brought in. The company is furnishing oil for fuel purposes to the Mexican Central Railroad and a number of industrial concerns scattered over the republic.

Luis de la Barra and Juan Bringas have taken steps to develop the Pichucalco oil field, situated in the State of Chiapas. Oil was discovered near Pichucalco some time ago, and it is believed by expert oil men who have examined the field that it will become a good producer.

First Trip to Texas by the Admiralty's Tanker "Petroleum."



The British Admiralty's oil tanker, "Petroleum," has recently made her first journey to Texas, and returned to England with a cargo of fuel oil—approximately 6,000 tons—for Admiralty needs. The cargo was loaded at the docks of the Gulf Refining Co. at Port Arthur. The "Petroleum," of which we herewith give an excellent reproduction, was built by Messrs. Swan, Hunter and Wigham Richardson, Ltd., a few years ago, its dimen-

sions being :—Length over all, 381 feet 8 inches ; breadth, 48 feet 8 inches ; depth, 30 feet 9 inches. Her engines were built by the North-Eastern Marine Engineering Co., of Wallsend-on-Tyne, and the boilers, three in number, are all arranged for burning liquid fuel.

We learn that during the past few days the "Petroleum," which by the bye was slightly damaged, has discharged her fuel cargo at the Admiralty's storages.

THE PETROLEUM TRADE IN AUSTRIA-HUNGARY DURING 1906.

The Austrian Ministry has just issued its report on the Galician petroleum industry during 1906, in comparison with 1905, information and statistics of the Galician industry is so scarce that the report, although much belated, nevertheless contains information which will be new to our readers.

The situation of the trade in crude and refined oils, generally speaking, was unfavourable. Prices realised proved below expectations, and the prices for refined oil on the home market were very low owing to the competition of outsiders' refineries, whilst on the other hand the prices obtained for the export oils, owing to the competition prevailing on the foreign markets, were also lower than in the preceding year. The advance which Petrolea was making on crude oil to the producers up to 1st October, 1906, was 2.25 kronen, and from that date 2.75 kronen per 100 kilogrammes.

The production of crude oil in Galicia during 1906 amounted to 760,443 tons as against 801,796 tons in 1905. The centre of boring activity was Tustanowice, but numerous trial borings had also been started in many other parts of Galicia. All the large firms remained unchanged, whilst among the small firms changes are going on constantly. A considerable amount of German capital has lately been invested in various petroleum enterprises. The combination of Galician crude oil producers called Petrolea, in April, 1906, terminated its agreements for the sale of crude oil on commission and concluded new agreements on the basis of a guarantee by the Kreditanstalt. Toward the end of 1906 the Petrolea seemed secure in its position of joint-selling organisation for crude oil, as it disposed of an enormous amount of storage accommodation and represented 78 per cent. of the Galician producers. Unfortunately, in 1907 things took a turn for the worse.

The operations of the Austro-Hungarian refineries are shewn in the following table (in tons):—

Refineries.	Quantity of Crude Oil Treated.		Production of Illuminating Oil.			
	1905.	1906.	For Home Consumption.		For Export.	
	1905.	1906.	1905.	1906.	1905.	1906.
In Galicia and Bukowina (11 large and 50 small ones) ..	223,280	215,129	80,225	83,076	41,134	45,068
In Austria, Bohemia, Silesia and Trieste (12 refineries) ..	281,776	393,705	78,312	74,275	82,867	108,419
In Hungary and Bosnisch-Brod (23 refineries) ..	157,656	222,421	78,411	87,937	36,223	17,330
Total	662,732	831,255	236,948	245,288	160,224	170,817

THE CRISIS IN GALICIA.

The increased production at Boryslaw and Tustanowice has been maintained during the last few months at between 100,000 and 110,000 tons per month, but the deliveries from the fields, which in the summer were about 80,000 tons per month, have fallen to 51,480 tons in November, and barely 50,000 tons in December. To store the surplus production special tanks have been erected by the producers, the purchasing firms, the transport companies as well as by the Government of Galicia. But notwithstanding this, there is still a great shortage of storage accommodation.

Crude oil for prompt delivery is quoted 14.30 to 15 kronen per ton, and for future delivery 20.50 to 21 kronen per ton. The number of refineries, now about one hundred, is increasing. Two large refineries have commenced working during the last few months, whilst three other new refineries are in course of construction. These refineries will easily be able to treat the whole of the crude oil production. Notwithstanding this, most of the refineries are suffering from a shortage of oil. Several have in consequence reduced their output, whilst others are about to close altogether. The reason for this shortage at a time when there is an abundant production of crude oil is the very unsatisfactory state of the means of transport. Boryslaw station is quite unable to cope with the needs of the petroleum industry, as it lacks the most elementary installations; there are no sidings or facilities for shunting or manœuvring trains. This state of affairs has been ruling for years, and no steps are taken to remedy it. The oil which cannot be forwarded has to be stored at a heavy cost. The storage and pipe line companies charge the producers 60 hellers

per month per ton for storage. Adding to this the cost of insurance and other expenses, the total cost amounts to 85 hellers per annum per ton on a selling price of 1.50 kronen per 100 kgs. This leaves to the producers 60 to 65 hellers per quintal, which is a mere fraction of the cost of production at Boryslaw, where wells have to be sunk to great depths.

The producers, says *Bursa*, are trying to improve things by selling crude oil for fuel purposes, and a company is about to be formed specially to promote this branch of trade.

Among the measures which must be adopted before any permanence in the trade can be looked for is the enlargement and equipment of Boryslaw station, and the provision of long trains, which could carry large quantities of oil at a time.

GERMAN JOTTINGS.

The Reine-Steinoförde Boring Co., of Hamburg, has struck oil in its first borehole at a depth of 202 metres. The borehole is situated on a plot of 15½ morgen in the Steinoförde district.

On the Hermansgluck plot of the Actiengesellschaft fuer Moutan-Industrie at Wietze oil has been struck in a new borehole.

A serious fire recently occurred on the property of the Deutsche Mineraloel-Industrie Actiengesellschaft at Wietze, caused by the ignition of the gases issuing from a borehole. The derrick and machinery on the property were destroyed. The adjoining property of the Deutsche Tiefbohrgesellschaft escaped serious damage.

On the 1st of January, 1908, reduced rates came into force for carrying crude oil from the Hanover oil fields to stations on the Prusso-Hessian and Alsace-Lorraine State railways.

The Atlas Co. has struck oil in its borehole on the plot at Hornbostel. The yield promises to be good.

THE TIN PLATE MARKET.

Messrs. Norton, Owen & Co., of 4, Bishopsgate Street Within, London, E.C., report under date January 16th, 1908, as follows :—

The quarterly meeting of the steel and tin plate trades was held at Birmingham on the 9th inst. There was a large attendance, but little anxiety to do business was manifested by buyers or sellers; both parties were apparently cautiously feeling their way. Buyers held off, and sellers appeared to be awaiting the course of future events, consequently little was done. This week, however, we have experienced one of those rapid changes which are characteristic of the tin plate market, buyers having apparently realised that after the severe slump in prices in the closing months of last year, nothing is to be gained by waiting, and they have suddenly come into the market for very large quantities, and an important amount of business has been put through for oil and other sizes for delivery extending well into the year.

Below we give particulars of the shipments of tin plates for 1907, the total tonnage being the largest since the record year 1891 (the year following the passing of the McKinley Tariff Bill in the U S. in 1890). The United States continues for the present to be our largest customer for tin plates, but it is gratifying to note that the East Indian trade is rapidly coming to the front, owing chiefly to the enterprise of European oil companies. The threats as to American “dumping” and competition appear to have fallen rather flat in South Wales, a new company, the Llanelly Steel Co., Ltd

(1907), having recently been registered with a capital of £250,000, most of which is called up, and the existing works are to be enlarged forthwith so as to double the present production of steel. The company will control the supply of steel bars to a very large number of tin plate mills and is the biggest combination of the kind in this country.

We quote oil sizes to-day :—

1c	18 ³ / ₄ × 14	124 sheets	110 lbs.	12/1 ¹ / ₂ per box.
1c	19 ¹ / ₄ × 14	120 „	110 „	12/1 ¹ / ₂ „
1c	20 × 10	225 „	156 „	17/3 „

F.o.b. Wales. Tin lining and iron hooping extra.

SHIPMENTS OF TIN PLATES.

		Twelve Months ended			
		Dec., 1906.	Dec., 1907.	Dec. 31, 1906.	Dec. 31, 1907.
		Tons.	Tons.	Tons.	Tons.
Russia	.. ..	1,615	2,203	4,581	8,381
German	/	3,395	2,877	36,998	41,065
Holland	.. ..	2,958	2,398	27,825	29,258
Belgium	.. ..	1,015	1,397	11,996	9,134
France	.. ..	1,664	2,532	24,349	25,801
Portugal	.. ..	631	498	10,214	9,876
United States	.. ..	6,783	3,442	61,518	58,920
British East Indies	.. ..	1,899	4,003	47,451	54,964
Australia	.. ..	1,311	1,568	16,159	14,639
Canada	.. ..	1,513	523	19,975	20,101
Other countries	.. ..	8,377	10,754	113,736	133,190
Total ..	Tons	31,161	32,195	374,802	405,329

THE CONSUMPTION OF BENZINE IN ROUMANIA.

The development in recent years of the consumption of benzine for motive power purposes in Roumania is shewn clearly in the following figures of the quantities of benzine which have been exempt from tax :—

		Tons.				Tons.	
1900-5	.. ..	555	....	1904-5	.. ..	1,880	
1901-2	.. ..	1,001	....	1905-6	.. ..	2,081	
1902-3	.. ..	869	....	1906-7	.. ..	3,493	
1903-4	.. ..	1,030					

PETROLEUM IMPORTS INTO THE UNITED KINGDOM DURING DECEMBER.

THE SHIPMENTS INTO VARIOUS PORTS.

The imports of petroleum and allied products into the United Kingdom during December amounted to 20,368,000 gallons, as compared with 25,605,460 gallons

in November and 28,774,650 gallons in October. The imports of the various products into the different ports were as under :—

			Lubricating.	Illuminating.	Residuals.	Benzine.	Other Products	Fuel.	Gas.
Aberdeen	...	...	520	2,800	—	—	—	—	—
Barrow	...	...	—	—	—	624,580	—	—	—
Belfast	...	...	3,550	21,840	—	—	—	—	—
Bristol	...	...	313,550	2,831,950	—	—	3,400	—	—
Dublin	...	...	245	—	—	—	—	—	—
Dundee	...	...	400	—	—	—	—	—	—
Glasgow	...	...	297,177	440	—	—	12,500	—	—
Gloucester	...	...	160	—	—	—	—	—	—
Grangemouth	...	...	22,530	42,280	—	—	—	—	—
Grimsby	...	...	3,180	—	—	—	—	—	—
Hartlepool	...	...	120	—	—	—	—	—	—
Harwich	...	...	2,400	—	—	—	—	—	—
Hull	...	...	468,470	—	—	20,000	15,840	—	—
Leith	...	...	19,720	54,972	—	—	—	—	—
Limerick	...	...	—	793,000	—	—	—	—	—
Liverpool	...	...	789,159	840,230	—	—	32,540	—	805,890
London	...	...	1,187,790	4,989,390	4,200	1,744,310	2,700	—	1,253,000
Manchester	...	...	1,005,864	571,000	—	—	9,200	—	271,350
Middlesboro	...	...	2,360	—	—	15,840	—	—	—
Newcastle	...	...	16,400	—	—	—	—	—	—
Plymouth	...	...	80	—	—	—	—	—	—
Southampton	...	...	5,040	—	—	—	—	—	—
South Shields	...	...	—	—	—	—	—	81,670	—
Stockton	...	...	400	—	—	—	—	—	—
Sunderland	...	...	—	1,118,270	—	—	—	—	—
Swansea	...	...	14,885	—	—	—	—	—	—
Totals	...	...	4,155,000	11,316,172	4,200	2,404,730	76,180	81,670	2,330,240

LATEST QUOTATIONS OF PETROLEUM SHARES.

ENGLISH COMPANIES.

This list is restricted to companies who have paid dividends or who are producers.

Company.	Capital Paid Up.	Value of Shares.	Latest Prices.
Assam Oil	£205,000	£1	$\frac{9}{16}$ - $\frac{11}{16}$
Baku Russian Petroleum ..	£750,000 Ord.	£1	1/9-2/9
"	£650,000 5½% Pref.	£1	3/9-4/3
Bibi-Eybat Petroleum Co. ..			7/0-8/0
Californian Oilfields ..	£250,000 Ord.	£1	5½-6½
Commonwealth Oil Co. Pref	18/- paid up (Prem.)		$\frac{1}{4}$ - $\frac{3}{4}$ pm
" Def.	£1 fully paid		$\frac{1}{8}$ - $\frac{1}{4}$
European Petroleum ..	£550,000 Pref.	£1	1/0-2/0
"	£550,000 Ord.	£1	0/6-1/6
"	£376,000 Deb.	£100	70-74
Russian Pet. & Liquid Fuel ..	£500,000 6½% Pref.	£1	3/6-4/6
"	£600,000 Ord.	£1	3/0-4/0
Schibaieff Petroleum ..	£575,000 6% Pref.	£5	$\frac{1}{16}$ - $\frac{1}{16}$
"	£575,000 Ord.	£1	3/0-4/0
Shell Transport & Trading ..	£2,000,000	£1 xd	44/3-45/3
"	£1,000,000 Pref.	£10	10½-10¾
Spies Petroleum Company ..	£312,500	10s.	6/6-7/0

RUSSIAN COMPANIES.

Company	Nom. Value in Roubles.	Quotations on Jan. 12th.	
		Lowest Roubles.	Highest Roubles.
Baku Naphtha Co.	100	562	564
Balakhany Naphtha Co. ..	250	—	—
Caspian Society	1,000	4,325	4,375
Mazout Co.	250	400	—
Melikoff, A. C.	250	—	—
Mirzoeff Bros.	250	—	—
Naftalan Co.	250	325	—
Naphtha Co. "Kavkas" ..	250	—	—
Naphtha Trading Co., A. I. Manta-			
cheff & Co.	250	154	156
Neft Co.	250	190	—
Nobel Bros.	5,000	10,700	10,800
"	250	535	540
Rops and Co. V.	250	300	—
Russian Naphtha Co. ..	250	100	—
Society Mazout	250	—	—
Ter-Akopoff Co.	250	—	—
Tumaieff & Co., J. G. ..	250	—	—
Volga-Caspian Naphtha and Trading Co	250	—	—
" (Second Issue)	250	—	—

SCOTCH COMPANIES

Supplied by Messrs. MACLEAN AND HENDERSON, STIRLING.

Company.	Capital Paid Up.	Value of Share.	Latest Prices.
Broxburn Oil Co., Ltd., Ord. 17/- pd	£235,000	£1	£1 18s. 6d.
Do. 6% Cum. Pref. ..	£100,000	£10	£11 18s 9d.
Burmah Oil, Ord.	£1,100,000	£1	£3 9s. 6d.
Do. Pref.	£250,000	£1	£1 5s. od.
Dalmeny Oil Co., Ord. (7 paid) ..	£37,800	£8 10s.	£5 10s. od.
Do. 5% Pref. ..	£18,900	£7	£4 13s. od.
Oakbank Oil Co., Ltd., Ord.	£170,000	£1	£1 13s. 9d.
(17s. paid)			
Pumpherstons Min. Oil Co., Ltd., Ord.	£110,500	17s.	£13 os. od.
(17s. paid)			
Do. 6% Cum. Pref.	£100,000	£10	£13 5s. od.
Tarbrax Oil Co., Ltd. Ord. (£1 pd.)	£38,350	£1	£2 15s. od.
Do. 6% Cum. Pref.	£35,000	£1	£1 3s. od.
Young's Paraffin Co., Ltd., Ord. ..	£452,808	£4	£3 9s. 6d.
Do. "B" Deb. ..	£150,000	£100	£165 10s.

DUTCH COMPANIES.

Company.	Latest Quotations (per cent.)	Florins.
Arnhemsche Petroleum Mij.	45	1,000
Aurora (Deb. 5%)	82	—
Campina Poiana Mij.	—	—
Dordtsche Petroleum Mij. (Pref.) ..	125	50
" (Deb. 4½%)	101	1,000
Gaboos	$\frac{1}{8}$	—
Holl. Rumeensche Petroleum Mij. ..	16½	1,000
Int. Rum. Pet. Mij.	78	500
Java Petroleum Mij. (Ord.)	—	1,000
" (Pref.)	18	—
Koninklyke Nederl. Pet. Mij. Shares ..	280	250-1,000
" Share certificates ..	275½	1,000
Mœara Enim Petroleum Mij.	278	100
" 1-1,000 Oblig. 5	134½	250-1,000
" Moesi Ilir " Petroleum Mij.	—	—
Nederl.-Rumeensche Petroleum Mij. ..	31½	—
Nieuwe Ned. Petroleum Mij. And. ..	—	1,000
Oliebronnen in Hannover Mij.	42	—
" (Deb. 5%)	88½	—
Panolan Maatschappij Cert.	250	—
Perlak Petrol. Mij. (6% cum. pr. A.) ..	125	1,000
" (Common)	—	—
Sumatra-Palembang Petroleum Mij. ..	90½	500
Tarakan Petrol Mij.	22½	—
Zuid Perlak Petrol. Mij. (Pref.) ..	85½	—

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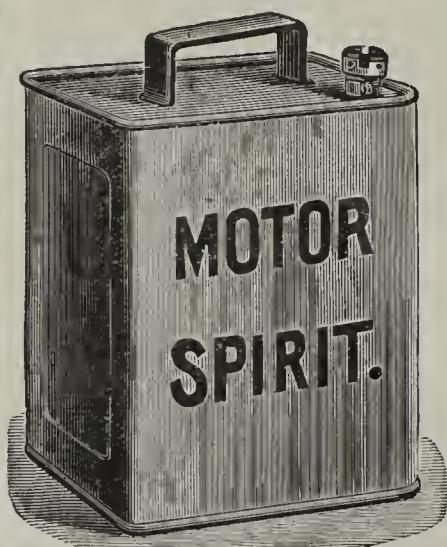
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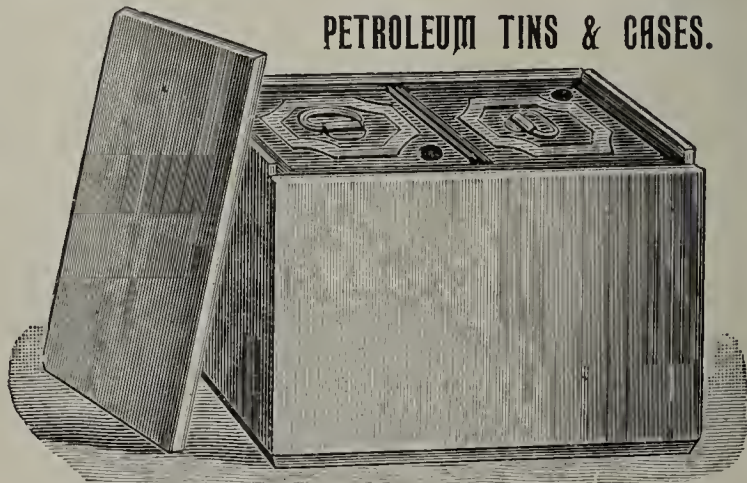
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SATURDAY, JANUARY 18, 1908.

THE TRIUMPH OF AERIAL NAVIGATION.

THE solution of the problem of aerial navigation remains no longer a difficulty to be surmounted in the future, for the recent experiments of Mr. Henry Farman with his Chanute type of aeroplane in France have conclusively proved that the problem of mechanical flight has now been mastered. For years past we have frequently had public attention drawn to the subject by various attempts made by different inventors with apparatus of their own design, and the recently offered substantial prizes to those who succeeded in starting from a given point, flying a certain distance, and then returning to the place of ascent, have undoubtedly gone a long way to stimulate interest in these experiments.

It was upon the occasion of the holding of the first International Petroleum Congress during the International Exposition at Paris in 1900 that the united interest of those engaged in the petroleum industry was first directed to this most fascinating subject of aerial navigation, by the presentation of a highly-instructive paper by Mr. Henry Deutsch, and we personally attach such importance to this contribution that we have this

week reproduced it upon other pages. Few there were present, however, on that occasion, who for one moment imagined that the prophesies of Mr. Deutsch would in comparatively so short a period become practical facts, yet time has shewn how carefully thought out were the details there driven home, and how well versed upon the somewhat mysterious necessities of an aeroplane the author of the paper was. As may be gathered from a perusal of the paper, Mr. Deutsch has spent many years in studying the question of aerial flight, as well as in carrying out some practical experiments, and his enthusiasm in the matter may be judged from the fact that by way of encouraging experiments with aerial bodies, he offered the famous prize of 25,000 francs to the person who succeeded in designing an aeroplane capable of fulfilling the requirements laid down. M. Deutsch found another ardent supporter of his views in the person of M. Archdeacon, and it is now common knowledge that each of these two gentlemen have during the present week presented Mr. Farman with his well-earned reward of 25,000 francs. The flying of a short distance of 500 metres may be considered by some as by no means suggesting a solution of the aerial problem, but the idea of the donators was that if a machine is capable of doing this, then there is no reason why it should not satisfactorily cover much longer distances, since, as we know, the whole problem of mechanical flight lies in preserving a balance when making sharp turns.

Thus with a solution of the problem of aerial navigation, the last of the long series of inventions, which were the dream of nineteenth century inventors, now becomes a practical fact, and with it dawns a period of real progress in mechanical air flight.

That the products of petroleum should in this direction find a fresh avenue for consumption, after having proved remarkable powers for propulsion both on land and sea, will come as little surprise to those interested in the petroleum industry. But whatever benefit eventually is received by the petroleum industry, the credit must most assuredly go to M. Deutsch, whose name is a household one throughout France, and who has done all that human energy and skill could, to not only arouse greater interest in the subject of aerial navigation, but to bring about the highly satisfactory results which are now to be recorded in the success of M. Farman's experiments. It is placed upon record that he is a noble benefactor to mankind who causes two blades of grass to grow where but one grew before, yet how much greater are the services of one, who by his untiring perseverance, opens up hitherto untapped channels for the extension of the now almost unlimited applications of the allied products of petroleum.

In the name of the petroleum industry, we extend to M. Deutsch, who has done so much in the past to bring the French petroleum refining industry up to its present position, our warmest thanks, and sincerely trust that the results, which he has so materially assisted to bring about, may bring to him, as to others, their true reward.

PHAROAH'S JUDGMENT UP-TO-DATE.

HERE is something approaching the biblical subject of Pharoah's judgment in the new position of that much criticised and deplorably unfortunate concern—the Baku Russian Petroleum Co. Its career has been one of failure upon failure, and now a misfortune, which may be likened to the plague of darkness which once spread over the land of Egypt, has cast its gloomy mantle over the whole miserable mass of blighted hopes and mis-spent finance. During the past few months, the agitation against the manner in which the company's affairs are at present conducted - and also against the gentlemen who conduct them—has been growing, until to-day a very substantial portion of the shareholders are associated together, determined at all costs to bring about a change in the management of the company.

But the directors are by no means desirous that the chains of office shall slip from their grasp, and so it comes about that Col. Ivor Philipps, M.P., the company's chairman, who, it might be added, secured a vote of "no confidence" at a recent meeting, yet still saw fit to remain in office, has now decided to retire. One would have thought that this retirement, for which so many shareholders have devoutly wished for a long time, would have immediately been made known to the shareholders, and they asked to appoint another gentleman in the place of the colonel. Had this step been taken, we are convinced that it would have gone a long way to inspire that feeling of confidence in the gentlemen at the helm, without which no company can make progress. But to the surprise of all will come the news that Colonel Philipps has secured another Chairman of the Board - the new colleague being Mr. Herbert Allen, late Chairman of the Anglo-Russian Petroleum Co.

We admit that we fail to see why such great power should be vested in a company's chairman, or even in a board, which allows the bringing in of absolutely fresh blood in the person of a new chairman without the sanction of the shareholders. It will, of course, be argued that in the case of Mr. Herbert Allen, he is no stranger to petroleum enterprises, having conducted another Anglo-Russian company. This is so, but perhaps the less said about it the better. One thing is certain, and that is that the "success" Mr. Allen's association with the Anglo-Russian Petroleum Co. is seen by the fact that as a result of an extraordinary meeting of the shareholders, he was forced to resign. In addition to being upon the respective boards of the Consolidated Electric Co., and the Anglo-Portuguese Telephone Co., Mr. Herbert Allen is, together with Colonel Ivor Philipps, associated with the Costa-Rica Railway Co., and those who read between the lines will easily see how this piece of shuffling with responsible offices has been brought about.

The shareholders have, without a doubt, already suffered quite enough, and why, following the pestilence of the past, this new plague of darkness should, at the instigation of the responsible chairman of the company be cast among the unlucky shareholders, we are at a loss to understand. What we are certain of is that like the plague of which we read in the Book of Exodus, this darkness will also be felt—felt most by the shareholders themselves, for according to the official list at the company's offices, the company's new chairman does not possess a single share.

THE REFINING OF CALIFORNIAN CRUDE OIL.

By MR. J. C. CHRISTENSEN, B.Sc.

(Concluded from page 18.)

A third method depends upon the use of sulphuric anhydride (mixed with other gases) as obtained in the manufacture of sulphuric acid by the "contact" process, said gases being passed into the oil, which is kept as cool as possible. The gasses passing into the oil have the following approximate composition:—

	By Volume
Sulphuric anhydride	3 to 5 per cent.
Sulphur dioxide	1 ³ / ₁₀ to 1 ..
Oxygen	8 to 12 ..
Nitrogen	89 to 83 ..

It will be noticed that a very large amount of gases having no action on the oil must be passed through it in order to utilise the small quantity of sulphuric anhydride in the mixture. Although the cost of pumping the gas is small, nevertheless considering its corrosive action on the machinery, and the great amount of time required to treat a batch of oil, it would seem that no especial advantage is to be gained by its use, although no doubt a great saving in acid is effected thereby.

Large quantities of acid are used in refining California oils, in order to remove the sulphur and other impurities therefrom. In California oils the sulphur is combined, probably in the form of sulphur ethers, which makes it very difficult to remove. The two best California oils on the market contain from '015 to '035 per cent. sulphur; the second grade oils from '03 to '06 per cent., and the cheapest as much as '13 per cent sulphur. The gravity, colour, viscosity, and distilling limits are of little importance, as shewn by the following tests:—

Sample No. 781.—Coal Oil.

Specific gravity ..	41.5° B.	DISTILLATION TEST.
Flash ..	110° F. (Abel)	Per Cent. up to 150° C... 1.0
Viscosity ..	114	" " 250° C... 80.0
Per Cent. Sulphur ..	0.015	" " 300° C... 15.0
Colour ..	Nearly water white	" Over 300° C... 4.0

This is a first grade oil, and will burn in any lamp.

Sample No. 790.—Coal Oil.

Specific gravity ..	44.0° B.	DISTILLATION TEST.
Flash ..	96° F. (Abel)	Per Cent. up to 150° C... 5.5
Viscosity ..	104	" " 250° C... 88.0
Per Cent. Sulphur ..	0.035	" Over 250° C... 6.5
Colour ..	Water white	

This is a first grade oil, and will burn in any lamp.

Sample No. 803.—Coal Oil.

Specific gravity ..	43.5° B.	DISTILLATION TEST.
Flash ..	105° F. (Abel)	Per Cent. up to 150° C... 1.0
Viscosity ..	106	" " 250° C... 96.0
Per Cent. Sulphur ..	0.11	" Over 250° C... 3.0
Colour ..	Standard white	

This is a very poor oil, and will burn only in certain lamps.

Sample No. 754.—Coal Oil.

Specific gravity ..	44.5° B.	DISTILLATION TEST.
Flash ..	105° F. (Abel)	Per Cent. up to 150° C... 0.5
Viscosity ..	104	" " 250° C... 96.0
Per Cent. Sulphur ..	0.015	" Over 250° C... 3.5
Colour ..	Water white	

This is a second grade oil, and will not burn in mammoth lamps.

Owing to the nature of the impurities in California oil, no method of treatment with 66° B. sulphuric acid alone will ever be successful, because 66° B. acid will not combine chemically with xylene and naphthenes, the chief constituents of the impurities. But either fuming sulphuric acid or sulphuric anhydride combine

readily with them, especially at higher temperatures, and are the only acids at present obtainable for the purification of kerosene distillate. Chlorosulphuric acid is even more effective, but not at present obtainable in quantity in this country.

Engine oils: The treatment of the lubricating oil distillate is the same as the treatment of benzine, except that the oil is maintained at a temperature of from 180° to 200° F. during the entire process, by means of a steam coil placed in the bottom of the agitator. The acid used is preferably not over 65° B. sulphuric acid, and the washing is performed most carefully, *i.e.*, the oil is agitated very gently, after separating the sludge as completely as possible. The lye used is weak—not over 3° B. If the agitation is vigorous, or the lye strong, an emulsion is formed from which it is very difficult to separate the oil. The clean oil is then put into a still and "reduced," *i.e.*, the lighter portion distilled off using much steam, until a sample taken from the still shews the proper viscosity. The oil which distills over is used for spindle or neutral oil, and what remains in the still if not up to colour, is again treated with a small portion of acid, etc., dried by blowing air through it at a temperature of not over 140° F., when it should shew a fine red colour by transmitted light, and a greenish blue colour by reflected light. The oil is sold as light or heavy engine oil, according to the gravity, has a fire test of about 480° F., and if properly made, is an excellent lubricant.

If it is desired to make cylinder oil, the distillation of the crude is stopped when the gravity of the still bottom is about 17.5° B. The still bottom, after cooling to near 180° F., is run into an agitator and treated with acid until the desired colour is obtained, neutralised with lye, washed somewhat, and reduced to the desired viscosity. The oil is a dark green viscous liquid of about 550° F. fire test, and of fair quality.

In some works it is the practice to allow the sludge to settle very perfectly and to reduce the cylinder stock without neutralising the acid. The acid is decomposed in the reducing process, and a perfectly neutral oil is obtained, which, however, is generally darker in colour than oil neutralised before reducing.

California lubricating oils can be compounded in the usual manner, and a great variety of products obtained. Some of the compounded oils are superior to the straight oil, while others are inferior. Axle grease, gun grease, and like compounds of good quality can be made.

Various other products of California oil are made in limited quantity, for example: floor oil, paint oil, substitutes for turpentine, etc., each usually being specially prepared to meet the demands of the customer.

The sludge obtained from the acid treatment of the light oils contains about 50 per cent. of acid, 70 per cent. of which may be recovered by proper treatment.

The sludge made by the use of cold acid is agitated

with sufficient water to make the acid which separates from the tar about 40° B. gravity. After standing in heated tanks one or more days, the separation of the acid is fairly complete, and it is drawn off from beneath the tar and run into leaden pans to be concentrated in the usual way. The acid finally obtained is about 65° B., dark brown or even black in colour, but perfectly suited for use in oil refining.

Sludge made by the use of hot acid is not amenable to this simple treatment, but as pointed out by Beilstein, is most easily and cheaply decomposed by superheated steam. To accomplish this, the sludge is put into lead-lined retorts of about 1,000 cubic feet capacity, and superheated steam passed through the mass for from ten to fourteen hours. The steam and oil vapour issuing from the retort are condensed in lead condensers, the oil separated and used for fuel. The acid and tar are allowed to stand in heated tanks until separated, when the acid is drawn off to be concentrated, and the tar used as fuel.

THE PRODUCTION OF PETROLEUM COMPOUNDS WITH LOW FLASHING POINTS.

A NEW PATENT.

An English patent has recently been granted to Mr. S. Osborn Cowper-Coles, a metallurgist, of Grosvenor Mansions, 82, Victoria Street, W., for an improved process for the production of petroleum compounds with low flashing points.

The invention relates to the production from paraffin (that is to say, liquid hydrocarbon obtained by the distillation at moderately low temperature of shale, peat or coal, or a mixture of these substances), of compounds having a low flashing point, and designed to serve as substitutes for petrol in internal combustion engines, by the known process in which a mineral oil is heated so as to cause vapour to be freely generated, the said vapour being then further heated to a sufficient extent to break it up, the ultimate product when condensed forming an oil of lower flashing point than the original oil.

According to the invention Mr. Cowper-Coles heats the paraffin in a still such as is commonly used for the distillation of mineral oils to a temperature sufficient to cause vapour to be freely generated as before described. The vapour so generated is conveyed through a series of small metal tubes which are heated to a temperature sufficiently high to break up the vapour passing through it. The vapour which is produced in the heated tubes is then collected and conveyed to any suitable condensing apparatus.

The area of the tubes through which the vapours are passed depends upon the rate at which the generation of vapour takes place, that is to say, to the rate at which they pass through the said tubes; generally speaking, the more rapid the distillation the greater must be the heating surface of the tubes.

The patentee has found that by proceeding as above described he is enabled to materially reduce the flashing point of paraffin. For example, if the flashing point of the paraffin in the still is 120° F., then the flashing point of the compound obtained in the condenser may be as low as 16° F.

SUCCESSFUL RUSSIAN COMPANIES DURING 1906.

In our last issue we announced the financial results of some of the Russian petroleum companies during 1906. Details are now to hand of a few other concerns, all of whose operations during their last financial year resulted in the realisation of a profit.

The Mazout Co. during the year had a gross revenue of 46,989,172 roubles and a net profit of 1,728,283 roubles. A dividend of 8 per cent. has been declared. There are debtors for 20,711,406 roubles, creditors for 42,236,173 roubles. The amortisation fund stands at 3,849,408 roubles; insurance fund, 800,000 roubles; and reserve fund, 448,299 roubles.

The Moscow-Caucasian Co., in their fifth financial year, had a revenue of 2,638,541 roubles, and a net profit of 1,731,267 roubles, out of which a dividend of 20 per cent. has been paid. There are debtors for 942,241 roubles, and creditors for 1,530,970 roubles. The amortisation fund stands at 914,211 roubles.

The Caspian and Black Sea Society, upon a revenue of 3,397,579 roubles earned a net profit of 396,063 roubles which was written off entirely for depreciation. There are debtors for 7,579,000 roubles, and creditors for 8,265,000 roubles. The amortisation fund stands at 9,594,932 roubles; reserve fund, 596,000 roubles; and special reserve fund, 2,677,000 roubles.

The Petrol Co., operating at Baku, has in its eighth financial year, 1906-7, earned a profit of 99,954 roubles, on a turn-over of 265,429 roubles. From previous years there is left a balance of a loss of 313,252 roubles. There are debtors for 117,146 roubles and creditors for 303,908 roubles. The capital aggregate 2,387,290 roubles.

THE VALUE OF NATURAL GAS IN THE UNITED STATES.

The following table sets forth the value of natural gas produced in the United States for the past quarter of a century:—

Year.	Value.	Year.	Value.
1882	\$215,000	1896	\$13,002,512
1883	475,000	1897	13,826,422
1884	1,460,000	1898	15,296,813
1885	4,857,200	1899	20,074,873
1886	10,012,000	1900	23,698,674
1887	15,817,500	1901	27,066,077
1888	22,629,875	1902	30,867,863
1889	21,107,099	1903	35,807,860
1890	18,792,725	1904	38,496,760
1891	15,500,084	1905	41,562,855
1892	14,870,714	1906	46,873,932
1893	14,346,250		
1894	13,954,400	Total.. ..	473,619,138
1895	13,006,650		

The above figures of the values of natural gas do not include the large amount that is consumed by small engines in various parts of the oil regions and by pumping powers at the oil wells. The introduction of the gas engine has wrought a wonderful evolution in decreasing the cost of producing oil and rendering it possible to operate wells of the smallest productive power at a profit.

NOTES FROM ALL QUARTERS.

ROUMANIA.

Encouraging.—The Bustenari Co., which has started several prospecting wells at Burloiu, on an extension of the Bustenari-Calinet-Campina oil zone, has found traces of oil there.

The Romano-American Company, having obtained by legal means the re-opening of its dépôt at Tergoviste, has commenced to sell illuminating oil in that town at the price of 20 centimes per litre.

Prospective Success at Tazlau.—One of the wells which the Steaua Romana is drilling at Tazlau, in the Bacau district, on the property of Princess Schoenberg-Waldburg, is about to strike oil.

Cheap Transport.—The administration of Roumanian State railways has agreed to continue for 1908 the reduction of two centimes per ton per kilometre on petroleum products transported in whole train loads.

Another Campina Spouter.—The Regatul Roman Co. has struck another spouter at Campina-Pitsgaia, which in the first day yielded more than 3,000 tons of oil. At the time of reporting, the borehole was being cleaned out.

Fire at Gura-Ocnitza.—On the night of December 30th a fire attended with fatal results occurred on the property of the International Co. at Gura-Ocnitza. The scene was the derrick of well No. 15, and the assumed cause was the friction of the wire rope working the baler. Three workmen in the derrick all perished.

Mr. T. Ianasescu, Chief Government Mining Engineer for the Prahova district, upon whom devolved the duty of supervising the working of the oil fields, has been promoted to the post of sub-director of the Mining Department of the Ministry of Domains. His place at Prahova is taken by Mr. E. Balasinovici, formerly chief mining engineer in the Buzeu district.

AMERICA.

In the Santa Maria Field.—The production of the Santa Maria field has recently greatly increased owing to the bringing in of several new wells. It is estimated that the output of the field for December approached 1,000,000 gallons.

To Drill in Louisiana.—A new company has recently been formed for the purpose of exploiting the field in the vicinity of Eunice, Louisiana, and 10 wells are to be commenced shortly in order that the company's holdings may be tested.

Californian Prices Unchanged.—The Californian oil market remains unchanged with a very firm demand. No oil is now going into storage, the various refineries quickly disposing of products. Prices for crude still range from 85 cents to \$1 per barrel.

The Texas Company's Pipe Line Completed.—The trunk pipe line of the Texas Co. from the Glenn Pool to Humble has been completed, and very shortly oil will be passing through it to the company's refinery at West Dallas, which is now approaching completion.

The Anse la Butte Gusher.—The gusher of which so much has been written is steadily decreasing its yield of oil, the estimate recently being put at 500 barrels per day. This quantity, however, represents less than 50 per cent. of the flow from the well, the rest being salt water.

Another Pipe Line.—The Ohio Oil Co.'s pipe line from the Martinsville pump station to the Standard Oil Co.'s refinery under construction at Wood River, near Alton, Ill., has been completed, and shipments from the field are now being moved. The new system has a capacity of about 15,000 barrels daily.

Another Louisiana Gusher.—With the announcement that the gusher at Anse la Butte is running out and turning to salt water, comes the report that an important extension has just been made to the field of Louisiana by the bringing in of a gusher upon what is known as the Lecklelt lease. This latest gusher is said to be going between 4,000 and 5,000 barrels daily, it being owned by the Noble Co., which was formed quite recently.

RUSSIA.

The Caucasian Star Petroleum Company in its second financial year, ended 1st April, 1907, incurred a loss of 1,353 roubles. The company has neither debtors nor creditors.

Sale of Ferghana Crude.—It is reported from Kokand that a local firm named Pateliachoff and Beberman have purchased from the Tchimion Petroleum Co. 100,000 poods of kerosene from Ferghana crude oil, and, as it transpired later, have re-sold it to Nobel Bros.

Water Wanted.—The great importance of fresh water for petroleum refining purposes has induced Messrs. Itzkovitch and Kagan to drill an artesian well at their refinery in Black City. The water obtained, however, had a bitter and salty taste, and the quantity was quite insufficient to satisfy the needs of this large refinery.

The Votan Petroleum, Engineering and Contract Boring Company, operating at Baku, during 1906, its seventh financial year, earned a profit of 88,943 roubles on a turnover of 603,447 roubles. The losses of preceding years stand at 293,875 roubles; debtors, 116,255 roubles; and creditors, 850,423 roubles. Aggregate capital, 1,100,728 roubles.

The Aralo-Caspian Petroleum Company in 1906, its third financial year, earned a net profit of 89,879 roubles, which was applied entirely to reduce the losses of the previous two years. This loss now stands at 180,346 roubles. The company has debtors for 2,639 roubles, and creditors for 237,361 roubles. Of the last-named sum 180,000 roubles is secured on a mortgage.

Better Late than Never.—The loss by leakage of oils carried on the Vladicaucasian Railway was last year double that of previous years. This has been found to be due to the carelessness of the company's agents in supplying tank waggons to senders in a leaky condition. Strict orders have now been given to all the agents and stationmasters to exercise the greatest care in this matter.

Real Advancement.—The use of iron in the Baku refineries is steadily increasing and is gradually displacing other building materials such as stone, bricks and wood. The reason is the high cost of building work with the last-mentioned materials and the greater practicability of iron structures. In a recently-constructed lubricating oil refinery the unusual course has been adopted of placing all the agitators on iron supports instead of brick foundations.

A Link with the Past.—Lubricating oil refineries, working on residuals bought from other firms, have not proved successful at Baku. There were only two such refineries established at Baku, both at Keshlt, or the White City. One was the Boulfroid Refinery, which was manufacturing special lubricants for export chiefly to France, but this has been closed some time. The only refinery of this kind now left in existence is one belonging to the Russo-Caucasian Naphtha Co., adjoining the Schibaieff refinery.

The Division of the Glouchkoff Tract.—Mr. Kitaef, Mining Engineer to the Cossack Army Administration, endeavours, in a recent issue of the *Trade and Industry Gazette*, to justify the action of the authorities in dividing up the Glouchkoff tract in a manner which will produce five northern plots, which are considered worthless for petroleum production. He contends that the non-productive nature of the northern part of the Glouchkoff tract has not yet been definitely proved, and, secondly, assuming that the northern half is unproductive, the adoption of the other method, i.e., of dividing the tract in a manner to produce 10 plots, each containing a non-productive half, would only leave five dessatines available for exploitation in each plot, which for Grosny he considers insufficient to justify the investment of any considerable amount of capital.

The Arnheemsche Petroleum Maatschappij held their annual meeting at Amsterdam last month. The report shews that in the year ended July, 1907, the company had a production of 12,041 tons of crude oil against 15,581 tons in the preceding year, and 17,951 tons in 1904-5. During the year the company sold about 10,000 tons of crude oil realising 281,459 francs. Working expenses amounted to 163,769 francs. The properties stand in the balance sheet at 507,489 francs. No dividend has been declared.

THE CONCORDIA COMPANY OF ROUMANIA.

The *Moniteur du Petrole Roumain* publishes in its latest issue the full text of the *Acti Constitutiv* of the Concordia, in which the Bustenari Co. and the Telega Oil Co. are to be amalgamated.

The company is formed for an unlimited period and the registered office is to be in Bucarest. The capital is 25,000,000 francs divided into 50,000 shares of 500 francs each. The shares will be issued to bearer, each holder having the right to require his shares to be registered in his name.

The founders of the company are:—(1) The Bustenari Co., of Bucarest, represented by Mr. Otto Petersen and Mr. H. O. Schlawe. (2) The Telega Oil Co. Ltd., of London, represented by the same two gentlemen. (3) The Italo-Romana Co., of Bucarest, represented by Mr. Vittorio Durando. (4) The Allgemeine Petroleum Industrie Actien-Gesellschaft, of Berlin, represented by Mr. Petersen and Mr. Schlawe. (5) Mr. A. G. Radovici, of Ploesti. (6) Mr. Otto Petersen, of Bucarest. (7) Mr. H. O. Schlawe, of Bucarest.

The Bustenari Co. transfers to the new company all its assets, including lands, wells, pipe lines, rolling stock, contracts, rights and privileges, without any exception whatsoever.

The Telega Co. transfers to the new company all its assets, such as lands, wells, pipe lines, and other properties, contracts, rights and privileges, including an agreement which it has with Messrs. Bentley and Congreve, and dated December 21st, 1903. The only exception are the shares which the Telega Co. holds in the Vega Refining Co., which are included in the transfer but remain the property of the Telega Co.

In both cases of the Bustenari and the Telega Co. the transfers are retrospective as from the 1st to 14th April, 1907, from which date the business is considered as having been carried for the account of the Concordia Co.

The total capital of the Concordia Co. is made up as under:—

	Francs.
Valuation of the assets of the Bustenari Co. ..	14,230,000
" " " " Telega Oil Co. ..	8,500,000
Italo-Romana Co. subscribes	1,620,000
Allgemeine Petroleum Industrie A.G. subscribes ..	620,000
Mr. A. G. Radovici subscribes	10,000
Mr. Otto Petersen " " " " ..	10,000
Mr. H. O. Schlawe " " " " ..	10,000
Total	25,000,000

The Bustenari and Telega Companies receive fully paid shares of the nominal amounts given above, whilst the other parties subscribe to the shares of the nominal amount set against their names in cash, paying to the company a premium of 100 per cent. over and above the nominal value of the shares. Of the money due on the subscribed shares 30 per cent. has already been paid up, and the balance is to be paid as and when required by the company.

The following gentlemen have been appointed directors of the company:—Mr. L. Allievi, Mr. C. Argetoianu, Prince V. Bibescu, Mr. Edmund Davis, Mr. F. Morani, Mr. Otto Petersen, Mr. Ch. Pouchani, Mr. A. G.

Radovici, Commander E. Scialoja, Dr. A. Solomonsohn, Mr. Max I. Schapira, Dr. P. de Schwabach, Dr. G. Salmssen, Mr. H. O. Schlawe, and Mr. D. Zamfirescu.

THE OPERATIONS OF THE ROUMANIAN REFINERIES.

STATISTICS FOR NOVEMBER.

The quantity of crude oil treated at the Roumanian refineries during November amounted to 87,125 tons. The quantities of products obtained were as under:—

	Tons.
Benzine	14,694
Refined oil and distillate	21,517
Lubricating oils, etc.	6,800
Residuals	40,567
Total	83,578

The quantities of various products delivered from the refineries for home consumption during November were:—

	Tons.
Benzine	80
Refined oil and distillate	5,496
Lubricating oils	312
Residuals	31,511
Total	37,399

The stocks of various oils at the refineries at the beginning and end of the month were:—

	Nov. 1st.	Nov. 30th.
	Tons.	Tons.
Benzine	30,458	42,866
Refined oil and distillate	50,372	51,041
Lubricating oils	16,252	21,096
Residuals	59,459	59,036
* Total	156,541	174,039

The output of paraffin scale in November was 55 $\frac{1}{4}$ tons; deliveries for home consumption, 51 $\frac{3}{4}$ tons; stocks at the end of the month, 33 $\frac{1}{2}$ tons.

ROUMANIAN PETROLEUM EXPORTS DURING NOVEMBER.

The following are the quantities of petroleum exported to various countries in November:—

Destination	Crude, gas oil, distillate, and lub. oil. Tons.	Illuminating oil. Tons.	Benzine. Tons.	Total. Tons.
India	179	10,617	—	10,796
Belgium	—	3,513	—	3,513
England	—	2,741	—	2,741
France	482	1,858	—	2,340
Turkey	49	1,515	2	1,566
Germany	—	—	765	765
Austria-Hungary	289	—	4	293
Bulgaria	197	310	24	531
Italy	48	—	241	290
Servia	12	—	—	12
Switzerland	5	—	—	5
Total, Nov., 1907	1,261	20,554	1,036	22,852
" " 1906	560	15,123	845	16,582

Change of Address.—Messrs. R. G. Shaw and Co., late of 88, Bishopsgate Street Within, London, E.C., have now removed to Winchester House, Old Broad Street, London, E.C., of which change note should be made.

THE REGENERATION OF ACIDS AND RESIDUES LEFT AFTER THE REFINING OF PETROLEUM PRODUCTS.

By Dr. R. WISCHIN.*

The regeneration in a useful manner of the products after the refining of illuminating oil and of heavy oils is one of the most important problems of the petroleum industry. In recent years numerous suggestions have been made on this subject without, however, coming to replace the primitive method of regeneration used until now by another and better method.

It is well known that at present the regeneration is effected exclusively in the same way as has been practiced for many years at Baku and elsewhere.

The acids obtained after the refining of illuminating oil are diluted in water until the solution shews about 35° to 37° B. By this dilution the largest part of the resinous matter appears on the surface, and is separated as far as possible by heating. The acid is then concentrated in lead chambers arranged in terrace form, and in this the largest part of the organic matter still found in the solution is carbonised. This transformation is carried out to the detriment of the yield of sulphuric acid, which, when being reduced, escapes in the form of sulphurous acid. The concentrated acid is generally diluted again in order to effect a further separation of organic matter; the acid is then concentrated in the first place in lead chambers, and lastly it is allowed to evaporate up to a concentration of 66° B. in cast-iron capsules.

The acid sludge obtained by the refining of heavy oils cannot be regenerated in this way. At Baku they make from it large quantities of an asphalt substitute which is added to natural asphalt to make it more elastic. For this purpose the thick acid residue is boiled by means of steam. Ultimately the greatly diluted acid is used for diluting the acid sludge of the illuminating oil refining, and the residue, freed from acid, is concentrated until it reaches the desired thickness. In Roumania also, the Steaua Romana has erected at Campina an installation for the regeneration of acid.

The lyes left after refining are on the contrary evaporated in boilers arranged in cascade form, and then concentrated in furnaces until they become a viscous soapy mass of petroleum in a dissolved condition. This mass is calcinated until it is transformed into carbonate of soda. The latter is then dissolved in water, and by treatment with heat the solution becomes caustic. It is clear that this process cannot be considered as rational, for the lyes are evaporated of 5° to 7° B. till they are dry in order to obtain a solution of a concentration of about 10° B.

In recent years the regenerating works at Baku have effected a considerable saving in the fuel used for evaporation by letting the viscous saponified mass from the furnaces flow into moulds, where they are allowed to thicken and are then cut into pieces, which are sufficiently hot to be able to heat up the first evaporating vessels.

In this way the fuel required for evaporating the water in the lyes is saved and carbonate of soda is obtained directly in the form of ashes. But in any case the petroleum acids are lost by the present process of regeneration. On the other hand there can be regenerated with profit only the lyes obtained in the refining of illuminating oils, and not those obtained in the refining of heavy oils, as the latter contains also too much sulphate of soda, which cannot be regenerated.

I have patented a process, which belongs to me and which permits of the utilisation by a continuous process of the acid sludge obtained in the refining of mineral oils, as well as the alkaline solutions, including those obtained in the refining of mineral oils, without submitting it to evaporation. This process consists of the following:—

(1) The acid sludge attained in the refining of mineral oils is distilled in cast-iron retorts with the addition of saw-dust or coal-dust. In this way a current of sulphurous acid is obtained, which is purified by passing it through solar oil, whilst a porous and very pure coke is left in the retorts.

(2) The sulphuric acid is conducted through a series of vessels filled with residues of the alkaline solutions used in refining. We thus obtain a solution of bisulfite of soda, on the surface of which float the separated organic acids.

(3) The solution of bisulfite of soda is boiled, so that sulphurous acid is separated and there remains a solution of monosulfite of soda.

(4) This solution is treated with carbonate of barium or strontium, and a current of carbonic acid (from processes 5 and 6) is introduced so that the carbonate of barium is transformed into sulphate of barium, which settles down at the bottom of the vessels, whilst the soda remains in solution in the form of bicarbonate of soda.

(5) This solution, submitted to boiling, gives off bioxyde of carbon, and there is left a solution of carbonate of soda.

(6) The sulphate of barium of the fourth process can be regenerated into carbonate of barium in the following manner:—The sulphate of barium is mixed closely with the coke of process (1), the mixture is calcinated in retorts. Bioxyde of carbon is again given off, and there is left in the retorts sulphur of barium.

(7) The sulphur of barium is dissolved in water, and through the solution is passed a current of carbonic acid. The carbonate of barium is then precipitated, whilst the sulphuretted hydrogen which is given off is transformed by burning into bioxyde of sulphur.

By this process the alkaline residues are regenerated by the humid way. On the other hand, the alkaline solutions left after the refining of mineral oils, which are rich in sulphate of soda, can also be easily regenerated. It is necessary to be guided by the advantages of the

* Read before the members of the Third International Petroleum Congress at Bucarest.

relative prices of the minerals, witherite and strontianite. I have, however, instead of these minerals, employed successfully slaked lime. In the latter case it is necessary that the introduction of bioxyde of carbon into the alkaline solutions of sulfite of sodium shall be made under a pressure of two or three atmospheres.

The regeneration of the acid sludge obtained in the refining of illuminating oil does not lend itself, generally speaking, to any appreciable improvement, and even such improvements as can be effected would rather concern a better utilisation of the acid residue than to the process of regeneration properly speaking.

The acid residue at present has no other use than as fuel. I believe, however, that it could be put to a better use.

During the treatment of illuminating oil distillates with sulphuric acid a part of the non-saturated hydrocarbons is polymerised by the acid, and part, by addition, gives rise to the formation of sulphuric ethers. The aromatic hydrocarbon by this process remain practically untouched because the formation of sulfonic acids does not take place in a solution so much diluted. But if fuming sulphuric acid will be used for treatment, with the application of heat, the aromatic hydrocarbons could be extracted in the form of sulfonic acids. In my opinion, these sulfonic acids of the alkyl of the acid residue are very interesting bodies from the chemical point of view, and could certainly be used as a raw material for the manufacture of chemical products. In order to obtain in a rational way these materials contained in the acid sludge, it would be necessary to dilute the acid sludge with water, and heat it in autoclaves under a pressure of two to four atmospheres. We obtain thus three layers of liquids: a diluted solution of sulphuric acid, another layer consisting of aliphatic alcohols, which have separated, and lastly a layer of aromatic hydrocarbons; this, however, is only the case when fuming sulphuric acid is used for treatment.

This process is cheap, and the acid obtained is much purer than by the process now in general use. The consumption of fuel is also much smaller.

In certain cases it might be remunerative to treat crude oil, as for example the Roumanian oils (which contain 20 per cent. and even more of aromatic hydrocarbons) with 15 to 20 per cent. of fuming sulphuric acids, with the application of heat, and then isolate the aromatic hydrocarbons in the manner indicated above.

PRODUCTION OF ENGLISH COMPANIES IN RUSSIA DURING 1907.

The four English companies operating in the oil fields of Russia, who publish weekly returns of production of crude oil, have, during the past year, produced the following quantities of crude oil:—Baku Russian Petroleum Co., Ltd., 212,950 tons; Russian Petroleum and Liquid Fuel Co., Ltd., 171,870 tons; Spies Petroleum Co., Ltd., 112,000 tons; and the European Petroleum Co., Ltd., 111,400 tons.

The Baku Russian Co.'s production shews a considerable improvement over the figures of 1906, the increase being approximately 2,000,000 poods, but the total figures of the Russian Petroleum and Liquid Fuel Co. are about the same as for 1906, though 3,000,000 poods behind those of 1905.

THE DEUTSCHE PETROLEUM ACTIEN-GESELLSCHAFT.

This company which was formed in 1904 by the Deutsche Bank, assisted by the Wiener Bankverein, the Darmstadter Bank, the Mitteldeutsche Bankverein, the National Bank für Deutschland, and the banking firm of J. S. H. Stern, has during the last financial year earned a profit of 1,170,000 marks, as against a profit of 1,130,000 marks during the preceding year. The directors recommend the distribution of a dividend of 5 per cent. In the preceding year, in spite of the substantial profit earned, no dividend was declared, the whole profit being carried forward to the following year's account. The company is a holding concern, its principal assets are the majority of the shares in the Steaua Romana Co. of Roumania. It also holds 10 per cent. of the shares of the European Petroleum Union, which is the joint distributing organisation of the majority of the petroleum producers in Europe. The results of the operations of the Steaua Romana were satisfactory, the crude oil production having increased by 50 per cent., whilst the output of products from the refineries increased from 229,416 to 313,915 tons. In the case of the European Petroleum Union the results were not so satisfactory, chiefly owing to the unsatisfactory state of affairs at Baku, which is the principal producing district in Europe. The last-named company, however, occupies a very strong position, and promises good results for the future.

The company also holds a considerable part of the shares of the Deutsche Mineralöl Actien-Gesellschaft, representing a combination of some of the more important producing firms in the Honover oil fields. This company, which has its offices in Cologne, has a good production, and finds no difficulty in marketing its products. The Kasbeck Syndicate, Ltd., of London, owning properties at Grosny, in which the Deutsche Petroleum A.G. is likewise interested, has during the past year made good progress.

The profit derived by the company from its various holdings has increased during the year from 879,221 to 1,127,445 marks. The outgoings in the form of expenses and taxes amounted to 128,537 marks and interest charges 36,469 marks.

PRODUCTION OF ENGLISH COMPANIES IN RUSSIA.

BAKU RUSSIAN PETROLEUM Co., LTD.—The production for the week ended January 4th was 242,000 poods, or 3,901 tons; and for the week ended January 11th was 234,000 poods, or 3,772 tons.

RUSSIAN PETROLEUM AND LIQUID FUEL Co., LTD.—The production for the week ended January 5th was 278,000 poods, or 4,482 tons; and for the week ended January 12th was 261,000 poods, or 4,208 tons.

SPIES PETROLEUM Co., LTD.—The output for the week ended January 5th was 133,500 poods, or 2,153 tons; and for the week ended January 12th, 128,880 poods, or 2,078 tons. The decrease is due to a partial stoppage during Christmas.

THE EUROPEAN PETROLEUM Co., LTD.—The production for the week ended January 5th was 118,567 poods, or 1,911 tons; and for the week ended January 12th was 121,492 poods, or 1,959 tons.

CORRESPONDENCE.

THE STANDARD OIL COMPANY.

AN APPRECIATION.

To the Editor of the PETROLEUM REVIEW.

SIR, —I have read with much interest Mr. Archbold's letter in your last issue in defence of the Standard Oil Co., and in all fairness to that powerful and wealthy concern or organisation, I would like to add a few remarks.

I have no interest for or against the Standard Oil Co., and I do not know anybody connected with it, but I have followed the development of the petroleum industry during the last 25 years sufficiently to realise what the Standard Oil Co., its managers and collaborators have done in the oil trade.

In 1881 I had the privilege of becoming acquainted with the late Ludwig Nobel, of Baku, when he told me in glowing language of the enormous possibilities connected with the oil industry, particularly as regards transport through pipe lines, by tank steamers and tank waggons, as well as regards the use of liquid fuel.

It is well known to your readers that the firm of Nobel, at Baku, were the first to introduce tank steamers on the Caspian, and their experience has also served to facilitate the building of tank steamers for the high seas.

Now, I do not know what income the Standard Oil Co. and its subsidiary concerns may have derived in the way of rebate from railway companies and others, but I am thoroughly convinced that the money so received can only be a very small percentage of the total profits of the concern; and I am equally satisfied that these profits have mostly been earned by a combination of almost miraculous foresight, combined with a power of organising and supervising which has never been manifested by any private or public undertaking, and which I consider far superior to any organisation ever before in existence. Mr. Rockefeller and his associates saw the enormous economies likely to result from the methods of transport mentioned to me by Mr. Nobel, and they had the courage and managed to obtain the capital to bring them into practical use. Compared to the economies derived from these new methods of transport of the enormous bulk of oil handled by the Standard Oil Co. and its subsidiaries the profits of the

concern are only moderate, and the bulk undoubtedly goes to the consumer.

If we consider the amount of foresight and energy, also of capital which has been required to establish the modern system of transporting oil direct from the distillery to the retailer as carried on by Standard Oil Co. in the United States, in Great Britain, in France, Germany, Italy, Holland, and many other countries, one must necessarily conclude that the profits of such an enormous undertaking should also be enormous, the more so as the methods of establishment of transport do not readily lend themselves to competition.

Whatever the ultimate outcome of the litigation may be, one thing is certain, that both in regard to foresight and enterprise in its establishment and in regard to control and maintenance in its actual carrying on, particularly also in regard to the treatment of its employes, the Standard Oil Co. will ever remain a monument and a shining example of the greatest possible business ability.—I remain, yours truly,

A. C. HOLZAPFEL.

THE STANDARD OIL COMPANY'S NEW REFINERY IN NEW JERSEY.

Details are now to hand concerning the Standard Oil Co.'s new refinery in New Jersey. When completed the new refinery will be the largest in the world, one section of it covering almost 1,000 acres. It will be built in sections. The first, which will contain stills for turning out 20,000 barrels of refined oil daily, will be completed before July next.

Ground for the erection of the first section of the plant was broken a few weeks ago, and already nearly 2,500 labourers, bricklayers, and iron workers are being employed. The new plant will be erected between Elizabeth and the shore of the Staten Island sound.

For the first section contracts have been awarded for supplying 15,000 tons of iron platework, 16,000 tons of sand, 18,000 tons of broken stone, and 8,000,000 bricks.

The company also intends to install new trunk pipe lines, so that their branch refineries in various parts of the United States may be supplied directly with crude oil.

Other plans are under way, it is said, which in time may result in bringing the centre of the oil industry of the world to New Jersey, where the Standard Oil Co. is incorporated.

CLASSIFIED IMPORTS INTO UNITED KINGDOM UP TO JANUARY 13th, 1908.

IN GALLONS.

[ALL RIGHTS RESERVED.]

COUNTRY.	ILLUMINATING.		LUBRICATING.		RESIDUALS.		GAS OIL. (Solar)		BENZINE.		FUEL OIL.		OTHER DESCRIPTIONS.		TOTALS.	
	Since Dec. 30.	From Jan. 1.	Since Dec. 30.	From Jan. 1.	Since Dec. 30.	From Jan. 1.	Since Dec. 30.	From Jan. 1.	Since Dec. 30.	From Jan. 1.	Since Dec. 30.	From Jan. 1.	Since Dec. 30.	From Jan. 1.	Since Dec. 30.	From Jan. 1.
Austria ...	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Belgium ...	—	—	39,150	39,150	—	—	—	—	—	—	—	—	—	—	39,150	39,150
Canada ...	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Dutch India ...	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Germany ...	16,740	16,740	113,860	113,860	620	620	—	—	—	—	—	—	—	—	131,220	131,220
Holland ...	—	—	3,090	3,090	—	—	—	—	—	—	—	—	2,400	2,400	5,490	5,490
Roumania ...	756,000	756,000	—	—	—	—	2,022,350	2,022,350	966,080	966,080	—	—	—	—	3,744,430	3,744,430
Russia ...	621,000	621,000	2,650	2,650	—	—	—	—	—	—	—	—	—	—	623,650	623,650
U.S.A. ...	6,328,380	6,328,380	1,139,940	1,139,940	—	—	2,190,870	2,190,870	—	—	—	—	14,000	14,000	9,673,190	9,673,190
Other Countries	—	—	1,810	1,810	—	—	—	—	—	—	440	440	—	—	2,250	2,250
	7,722,120	7,722,120	1,300,500	1,300,500	620	620	4,213,220	4,213,220	966,080	966,080	440	440	16,400	16,400	14,219,380	14,219,380

THE CANADIAN OIL FIELDS OF KENT COUNTY.

Mr. C. W. Knight, acting under instructions from Thomas W. Gibson, Deputy Minister of Mines for Ontario, has recently prepared an exhaustive report on the oil fields of Kent county. His attention was first directed to Tilbury, and his findings after a study of that oil belt are interesting and valuable. He estimates that the number of wells in that field increased during 1907 at the rate of twenty per month. "In March, 1907," he says, "there were said to be 150 wells drilled in, of which only about four were dry. On July 1st the number of producing wells was 235. Besides these there were 33 dry holes and 26 new wells being drilled. In the Romney pool at the same date there were 47 wells, of which 24 were dry. The percentage of dry holes in the latter field is much higher than in the Tilbury field. Roughly speaking the real producing area is eight and a-half miles long and three miles wide."

Mr. Knight says the following are some of the largest operators: - Volcanic Oil and Gas Co., Chatham, Ontario; Roth, Argue and Co., Chatham, Ontario; Leamington Oil Co., Detroit, Mich.; Congress Oil Co., Wellsville, N. Y.; E. C. Bradley and others, Wellsville, N. Y.; F. S. Clark, Andover, N. Y.; The Empress Tilbury Oil and Gas Co., Chatham, Ontario; and the Maple City Oil and Gas Co. Chatham, Ontario.

It was found impossible, he continues, to learn the number and location of wells that had at one time been producing oil, and that had subsequently ceased to produce. But Mr. McCright, of the Imperial Oil Co., supplied the location of the following dry holes:—In Raleigh township—Lot 4, concession III., south-west corner; Vince farm, lot 3, concession V., centre of west half; Williams farm, lot 4, concession VI., the north part; Newham farm, lot 2, concession VII., centre west part; Kahlar farm, lot 1, concession VII., near township road; Lahey farm, lot 1, concession VIII., centre of lot, near township road; McKeon farm, lot 1, concession IX., north-west part; McKeon farm, lot 2, concession VIII., centre west part; Lecocq farm, lot 4,

concession A, west part of lot; Orr farm, lot 9, concession III.

East Tilbury:—Roman Catholic Church, lot 1, concession III., west part of lot; R. Purdy farm, lot 3, concession IV., south-east part; Reaume farm, lot 4, concession V., south-east corner; A. Simard, lot 3, concession VI., east part (a well here produced oil, but the well has been abandoned and the casing withdrawn); Adam farm, lot 4, concession VII., west part, produced a little oil, but abandoned; Tracey farm, lot 4, concession VII., south part; J. D. Cooper farm, lot 5, concession VII., south-east part; Murphy farm, lot 7, concession VII., centre east part; Norry farm, small triangular lot or gore, lot 11, concession VII.; Ross farm, lot 10, concession VII., south part.

The usual agreement which the operators have made with the farmers is that the latter shall receive a royalty of one-eighth of the output, the operator being allowed to drill where he pleases and to erect such buildings as may be necessary. In the case of some of the more recent leases, in addition to the one-eighth royalty, a bonus of several hundreds or thousands of dollars in cash has been paid, and the operator has been required to place his pipes and surface rod in such locations as would interfere as little as possible with farm operations.

Mr. Knight thus describes the location of the fields:—"Chatham is some 10 miles north-east of the Tilbury field, while the Romney pool is about seven miles south-west of the latter. Both fields derive their names from the townships in which they occur. They lie between Lake St. Clair on the north-west and Lake Erie on the south-east. While visiting the district it is the custom of some operators to make their headquarters at Chatham and drive thence to the fields. The town of Tilbury, six miles west of the field, is also used by oil men as headquarters. At the time of my visit the majority of the operators were said to be there. The post office of Fletcher is a central point in the Tilbury field; there are one or two boarding houses here where accommodation may be obtained. The village of Merlin (two miles east of the Tilbury field) on the Pere Marquette Railway, may also be used as headquarters by anyone desiring to see the new region. All of the country around the Tilbury field is cleared and is regarded as good farming country."

GULF REFINING CO.,

Refiners of Indian Territory and Texas Petroleum.

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SUPERIOR LUBRICATING OILS OF HIGH VISCOSITY AND LOW COLD TEST.

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The American Oil Market.

New York, Week ended Jan. 4th.

The effect of the holiday season has been much in force in the lower South-west fields during the interval, but a development of more than the usual significance has been recorded in the Eagle district of Harrison county, West Virginia, where a second test resulted in a producer in the Gordon that was credited with 583 barrels the first 45 hours after the pay stratum had been reached. The gauge recorded but 100 barrels during the 24 hours, but the check was attributed to a mishap in tooling. The location is 900 feet from a well completed several months ago which is sustaining more than 100 barrels a day. Some deep sand operations in Wetzel county have given encouraging indications of oil in paying quantities, and a similar result was reported in the Lincoln district of Marion county. What was declared to be the best gasser encountered in the Church district of Wetzel county is reported in a completion, the estimated capacity of which is 20,000,000 cubic feet a day. The monthly report of all the fields of the Pennsylvania classification shews a decided check to operations during December, completions numbering 539, against 652 and 703 during the two previous months. In the face of this decline the new production stands most creditably at 2,991 barrels, against 2,924 and 2,553 barrels for November and October respectively. Allowing for the 141 dry holes encountered last month, the average new production per successful well, says the *Oil, Paint and Drug Reporter*, reaches $7\frac{1}{2}$ barrels, as compared with $5\frac{7}{8}$ barrels for November, and $4\frac{3}{4}$ barrels for October. Of less favourable significance is the summary of new work undertaken by the close of December, the aggregate of rigs up and wells drilling being 602, or 100 less than was recorded on the corresponding day in November. Advices from our Illinois correspondent note little of interest in recent operations in that field, work being curtailed to a considerable extent. The returns for the week shewed a total of 61 completions, with dry holes and gas wells numbering 13. The new production amounted to 4,317 barrels. Illinois statistics for December record field operations of comparatively light extent, 334 wells having been drilled, the smallest total of the year with the exception of January, with 253 to its credit. December operations in the Mid-Continent field represented a material slump, but not to such a marked extent as had been predicted. Completions for the month numbered 333 wells, against 421 in November. The most important development during the month was the strike of a gusher in the Osage Nation, which registered an initial flow of 5,000 barrels a day, and promising extensions were defined. Strong indications were also reported of finding a lead from the Morris pool. The Jennings field in Louisiana is again to the front with a gusher outside of proven territory which was reported good for about 4,000 barrels a day.

REFINED AND PRODUCTS.—Conditions in the local market for refined have reflected more the holiday character than was previously noted, the effect being especially marked in the export movement. Our record of clearances for the week aggregates 5,662,160 gallons, the greater proportion, 4,575,000 gallons, being forward, as usual, in bulk. For the previous week, we reported the shipment of 9,835,490 gallons, of which 8,353,000 were in bulk. Chartering of supplementary vessels has also been light, no definite engagements having come to the surface. There are no new developments regarding values, which remain stationary but apparently maintained with unabated firmness. The uneventful character of the market for the various products has not been varied by the passing of a week of general dulness. There is no question of the continued firmness of the high test descriptions, but those produced from the lower grades of crude are less favourably regarded. There has been a marked shrinkage in exports of naphtha for the week, 7,350 gallons being recorded against 242,130 gallons during the previous week.

CLOSING QUOTATIONS

CRUDE.	In cents per gallon.	Week ended	
		Dec. 28. 1907.	Jan. 4. 1908.
Pennsylvania crude in bbls.	—	—
Pennsylvania crude in bulk	—	—
Residuum, bbls for export	—	—

CRUDE AT THE WELLS.

The quotations for oil represented by credit balances were:—

		Week ended	
		Jan. 4. 1907.	Jan. 4. 1908.
Pennsylvania .. ..	..	\$1.64	\$1.78
Tiona .. ..	..	1.74	1.78
North Lima .. ..	..	0.98	0.94
South Lima .. ..	..	0.93	0.89
Indiana .. ..	..	0.93	0.89
Illinois, heavy, below 30 deg. ..	..	—	0.60
Kansas and Indian Ter., 32 deg. and above .. ..	..	0.54	0.41
Heavy .. ..	..	—	0.28
Humble, Tex. .. ..	..	—	0.75
Saratoga .. ..	..	—	0.73
Sour Lake, Tex. .. ..	..	—	0.77
Jennings, La. .. ..	..	—	0.72
CANADIAN OIL:			
Petrolia .. ..	..	1.37	1.34
Oil Springs, less pipeage .. ..	..	1.44	1.41

REFINED—FOR EXPORT.

	In cents.	Week ended	
		Jan. 4. S.W.	Jan. 4. W.W.
Barrels, cargo per gal.	..	8.75	@10.75
Philadelphia	8.70	@10.70
Bulk, New York	5.00	@7.00
Bulk, Philadelphia	4.95	@6.95
Cases, New York	10.90	@13.90
Cases, Philadelphia	10.85	@13.85

REFINED IN CASES—110 FIRE TEST.

		Week ended	
		Dec. 28. 1907.	Jan. 4. 1908.
3,000 to 10,000 .. ..	..	11.05	11.05
1,000 to 3,000 .. ..	..	11.10	11.10

REFINED—JOBGING LOTS.

In barrels, pkgs. included.

		Week ended	
		Dec. 28.	Jan. 4.
120 fire test, S.W. .. in barrels	..	12	12
130 fire test, S.W. .. ..	..	12½	12½
150 fire test, W.W. .. ..	..	13½	13½
In bulk from tanks .. ..	..	10	10
300 fire test .. ..	..	13½@14	13½@14

NAPHTHA AND GASOLENE.

		Week ended	
		Dec. 28.	Jan. 4.
Naphtha, crude, car. lots, 68 @ 72 deg.	..	15.00	15.00
Gasolene, 86 deg. .. ..	..	24.00	24.00

PENNSYLVANIAN OIL RUNS from Dec. 23rd to Dec. 29th were:—Dec. 23rd and 24th, 177,564; Dec. 25th, 227,896; Dec. 26th, 100,152; Dec. 27th and 28th, 309,490; and Dec. 29th, 253,662.

THE DELIVERIES OF PENNSYLVANIA OIL from Dec. 24th to Dec. 30th were:—Dec. 24th and 25th, 390,198; Dec. 26th, 196,741; Dec. 27th, 193,304; Dec. 28th and 29th, 303,919; and Dec. 30th, 175,756.

CLEARANCES FOR THE WEEK.

During the week ended Jan. 3rd, and since Jan. 1, the clearances of petroleum, in gallons, from the port of New York, were as follows:—

		Week.	Year.	1907.
Refined .. ..	..	5,662,160	5,662,160	10,454,376
Crude .. ..	..	—	—	—
Naphtha .. ..	..	7,350	7,350	69,100
Residuum .. ..	..	5,000	5,000	2,000

EXPORT STATISTICS.

The total exports from the port of New York and from the United States have been:—

	Gallons.
From New York, week ended Jan. 3rd ..	7,549,547
Total from New York, from Jan. 1st, 1908 ..	7,549,547
Same period last year	13,405,426
Decrease	5,855,879
From United States, week ended Jan. 3rd ..	15,305,332
Total from United States, since Jan. 1st, 1908 ..	15,305,332
Same period last year	17,365,779
Decrease	2,060,447

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The "Review" Shipping List.

JANUARY 17, 1908.

(The following abbreviations are used in this table:—L. Left; P. Passed; Arr. Arrived; Sp. Spoken; Tr. Trading.)

Vessel.	From.	For.	Latest Date and Position.	Vessel.	From.	For.	Latest Date and Position.
ALCHYMIST	Selzaete	Bayonne	P. Shoreham, Jan. 12	EZIO	—	—	Coasting Peru
ALICE ISABELLE..	Philadelphia	Sables d'Olonne	Arr. Dec. 30	FRANCE MARIE ..	Marseilles ..	Philadelphia	L. Jan. 4
ALEMBIC	New York ..	Shoreham ..	Arr. Jan. 14	GEESTEMUNDE..	New York ..	Copenhagen	L. Jan. 10
AMERICAN	Puerto.....	New York ..	Arr. Jan. 4	GENESSE	Sabine	Newport Nws & Queenstown	L. Dec. 31
APPALACHEE	Bengkalis ..	San Francisco	L. Dec. 28	GEORGIAN	Tyne	New York ..	Arr. Jan. 6
APSCHERON	Batoum	St. Louis	Arr. Jan. 7	PRINCE	—	—	—
ARAL.....	and Genoa	(Rhone)	—	GOLDMOUTH	Singapore ..	London	P. Dover, Jan. 16
ARAS.....	Tyne	Philadelphia	Arr. Jan. 9	GUTHEIL	Stettin.....	New York ..	In Tyne, Jan. 9
ARGYLL	—	—	L. Jan. 5	HAINAUT	Alexandria ..	Antwerp	At Bona, Jan. 7
ASHTABULA	Shanghai ..	San Francisco	Arr. Jan. 8	HARRY	Hull.....	New Orleans	L. Plymouth, Jan. 14
ASTRAKHAN.....	Philadelphia	Hamburg ..	Arr. Jan. 13	WADSWORTH	—	—	—
ATLAS	—	—	Coasting U.S. (Pacific)	HELIOS.....	New York ..	Hamburg ..	P. Dungeness, Jan. 14
AUGUSTA	Kustendje ..	Christiana ..	P. Faerder, Jan. 10	HOTHAM	New York ..	Dunkirk	L. Jan. 6
AUGUST KORFF..	Philadelphia	Avonmouth	Arr. Jan. 14	NEWTON	—	—	—
AUREOLE	Oporto & Dartmouth	New York ..	Arr. Jan. 10	HOUSATONIC	Barrow	New York ..	Wrecked, Maiden Rock, Jan. 5
AZOV.....	—	—	Trading on W.C. of South Amca.	IMPERIAL	—	—	Tr. on Lakes btn. U.S.A. and Can.
BAKU STANDARD	Rouen.....	Philadelphia	At Queenstown, Dec. 13	IOANNIS COUTZIS	Batoum	Dunkirk	L. Constant'ple, Dec. 29
BALAKANI	Tyne	Port Arthur (Texas)	P. Dover, Jan. 2	IROQUOIS	London	New York ..	P. Lizard, Jan. 13
BATOUM	—	—	At Sumatra, . Dec. 24	J. B. AUG. KESSLER	Thameshaven	Philadelphia	At Del. Break., Jan. 13
BAYONNE	Granatello ..	Batoum	P. Dardenelles, Jan. 10	JAMES BRAND	Philadelphia	London	Arr. Dec. 25
BEACON LIGHT ..	Rotterdam ..	Philadelphia	Arr. Jan. 5	JULES HENRI	Marseilles ..	Philadelphia	P. Gibraltar, Dec. 19
BEME	Bombay	Rangoon....	L. Oct. 22	KURA	Tyne	Philadelphia	L. Jan. 11
BLOOMFIELD	Penarth	Batoum	P. Sagres, Jan. 9	LA CAMPINE.....	Antwerp	Philadelphia	Arr. Jan. 7
BORJOM	Batoum	Alexandria..	Cld. Constant'ple, Jan. 9	LA FLANDRE	Philadelphia	Ghent	P. Reedy Island, Jan. 6
BRILLIANT	Philadelphia	Copenhagen	L. Jan. 11	LA HESBAYE.....	Antwerp	Philadelphia	Arr. Jan. 9
BROADMAYNE....	Dartmouth.	Philadelphia	P. Prawle Pt., Jan. 1	LA MADELEINE ..	Algiers	Brest	Arr. June 16
BULLMOUTH	Palembang..	Kobe	L. Jan. 4	LA VIGUESA.....	Corunna....	Ferrol	Sold, Argentina
BULYSES.....	New York ..	Calcutta	Arr. Jan. 9	LACKAWANNA....	Kustendje ..	Kurrachee ..	P. Perim, Jan. 11
BURGERMEISTER	Philadelphia	Stockholm ..	P. Del. Break., Jan. 1	LANSING.....	San Francisco	Pt. San Luis	L. Jan. 1
PETERSEN	—	—	—	LE COQ.....	Philadelphia	La Pallice & Bordeaux	At La Pallice, Jan. 15
CALCUTTA.....	San Francisco	Shanghai ..	Arr. Jan. 2	LOUTSCH	Nicolaieff ..	Batoum	Arr. Dec. 31
CAPTAIN A. F.	London	Pensacola ..	Arr. Dec. 6	LUCERNA	Tyne	Philadelphia	P. Dunnet Head, Jan. 11
LUCAS	—	—	—	LUCILINE	Rouen.....	Philadelphia	P. Lizard, Jan. 13
CARDIUM	Kustendje ..	Alexandria ..	Cld. Constant'ple, Jan. 9	LUMEN.....	Port Arthur (Texas)	Bouc	P. Cap: Henry, Jan. 5
CATANIA	San Francisco	Columbia River	At Astoria, Dec. 28	LUX	Kustendje ..	Rouen.....	At Havre, Jan. 13
CAUCASIAN	Hamburg ..	Philadelphia	P. Prawle Pt., Jan. 12	MANHATTAN	New Orleans	Bremen	In Downs, Jan. 14
CHARLOIS	Amsterdam..	New York ..	P. Lizard, Jan. 13	MANNHEIM	Amsterdam..	New York ..	Arr. Jan. 10
CHESAPEAKE	Aroe Bay ..	Philadelphia	Arr. Jan. 1	MARGARETHA ..	Kustendje ..	Hull.....	Arr. Jan. 3
CHESTER	Antwerp	New York ..	Arr. Jan. 9	MAVERICK.....	Seattle	San Francisco	Arr. Oct. 6
CIRCASIAN	Caleta Buena	Callao	L. Oct. 3	METEOR.....	Batoum	Vladivostock	At Singapore, Dec. 3
PRINCE	—	—	—	MEXICAN PRINCE	Kustendje ..	Rouen.....	Arr. Portland, Jan. 14
CLAM	—	Singapore ..	Arr. Dec. 23	MIRA	Batoum	London	P. Constant'ple, Jan. 6
COL. E. L. DRAKE	San Francisco	Astoria	Arr. Jan. 1	MUREX.....	Tsingtan	Singapore ..	L. Dec. 26
COWRIE	Venice.....	Kustendje ..	Arr. Jan. 4	NARRAGANSETT..	London	New York ..	L. Jan. 1
CUYAHOGA	Manchester .	Philadelphia	P. Eastham, Jan. 3	NERITE	—	—	Tr. in China Seas
CYMBELINE	Philadelphia	London	L. Jan. 13	NEW YORK	Southampton	New York ..	In Wireless Com., Browh'd, Jan. 13
CZAR NICOLAI II.	Batoum	Hamburg ..	Cld. Constant'ple, Jan. 7	OCEAN	Antwerp....	New York ..	P. Prawle Pt., Jan. 6
DAGHESTAN.....	Batoum	Antwerp	L. Jan. 11	OILFIELD	Rouen.....	Philadelphia	L. Dartmouth, Jan. 14
DAKOTAH	San Francisco	Hong Kong	L. Dec. 19	ORANJE PRINCE..	Tyne	Manzanillo & Ensenada de Morra	At Manzanillo, Jan. 4
DELAWARE	New York ..	Barrow	L. Jan. 6	ORIFLAMME	Philadelphia	Havre	P. Del. Break, Jan. 4
DEUTSCHLAND ..	New York ..	Bremerhaven	L. Jan. 1	OSCEOLA	Bremen	Tyne	Arr. Jan. 3
DIAMANT	Tyne	Philadelphia	L. Jan. 10	OTTAWA	London	New Orleans	P. Dover, Jan. 14
EDWARD	Antwerp ...	Middlesboro	Arr. Dec. 13	OURAL	Hamburg ..	Batoum	P. Gibraltar, Jan. 8
DAWSON	—	—	—	—	—	—	—
ELAX.....	Bombay	Aroe Bay ..	L. Jan. 1	—	—	—	—
ELISE MARIE	Philadelphia	Malmö	L. Jan. 9	—	—	—	—
ENERGIE	Pillau and Tyne	New York ..	P. Dunnet Head, Jan. 15	—	—	—	—
ERIVAN	Ellesmere ..	Batoum	Arr. Jan. 12	—	—	—	—
ETELKA	Cette	Philadelphia	Arr. Jan. 15	—	—	—	—
EUPLECTELA	Singapore ..	Europe	L. Jan. 7	—	—	—	—
EXCELSIOR	New York ..	Hamburg ..	L. Jan. 12	—	—	—	—

Vessel.	From.	For.	Latest Date and Position.	Vessel.	From.	For.	Latest Date and Position.
PALEMBANG	Calcutta	Aroe Bay ..	L. Dec. 18	SOYO MARU	Antwerp	San Francisco	Arr. Jan. 6
PAULA	Philadelphia	Flushing	P. Del. Break, Jan. 3	SPONDILUS	Tyne	Singapore ..	P. Perim, Jan. 11
PECTAN	London	Emden & Galveston	P. Prawle Pt., Dec. 23	STANDARD	Philadelphia	Stettin.....	Arr. Jan. 12
PENNOIL.....	Rotterdam ..	Philadelphia	Arr. Jan. 9	STROMBUS	Bremerhaven	Batoum	P. Dardenelles, Jan. 10
PERLAK	Colombo....	Sumatra	L. Dec. 11	SURAM.....	Penarth	Kustendje ..	P. Gibraltar, Jan. 13
PHOEBUS	New York ..	Hamburg ..	L. Jan. 8	SUWANEE.....	Hull	Tyne	Arr. Jan. 10
PINNA	Gaviota	Yokohama ..	Arr. Dec. 30	SVIET	Odessa	Batoum	L. Jan. 4
POTOMAC	Sunderland..	Philadelphia	Arr. Jan. 15	TELENA	Messina	Kustendje ..	L. Jan. 7
PROMETHEUS....	Rotterdam ..	New York ..	L. Jan. 15	TEREK.....	Avonmouth	Port Arthur (Texas)	P. Barry Island, Jan. (?)
PRUDENTIA	Hankow	Singapore ..	L. Shanghai, Dec. 7	TIFLIS	Antwerp	Batoum	P. Sagres, Jan. 11
QUEVILLY.....	Philadelphia	Rouen.....	P. Del. Break., Jan. 4	TIOGA	Manchester	London and Galveston	P. Eastham, Jan. 14
RION	Penarth	Kustendje ..	L. Algiers, Jan. 6	TONAWANDA	San Francisco	Hong Kong	At Chingkiang, Jan. 12
ROCK LIGHT	Cardiff.....	Kustendje ..	P. Barry Island, Jan. 11	TROCAS	Calcutta	Aroe Bay ..	L. Jan. 8
ROMANY.....	Cochin	Aroe Bay ..	L. Jan. 7	TURBO.....	Batoum	Hamburg ..	Ashore Hanks, Jan. 7
ROSSIJA	Tyne	Pensacola ..	L. Dec. 11	TUSCARORA	London	New York ..	P. Lizard, Jan. 15
ROTTERDAM	New York ..	Rotterdam ..	P. Lizard, Jan. 15	TWINGONE	Rangoon ..	Madras	Arr. Dec. 12
RUSSIAN PRINCE	Philadelphia	—	P. Del. Break., Dec. 24	VEDRA.....	Palembang..	Yokohama ..	L. Dec. 3
SALAHADJI	—	—	Tr. Sts. Settlem'ts and Java Seas	VILLE DE DIEPPE	Rouen.....	Philadelphia	L. Dec. 22
SAN CRISTOBAL..	Rouen.....	Tyne	Arr. Dec. 31	VOLUTE	Soesoe.....	Freshwater..	Arr. Jan. 3
SAN IGNACIO	Philadelphia	Gijon	L. Dec. 27	WASHINGTON....	New York ..	Hamburg ..	Arr. Jan. 9
DE LOYOLA	—	—	—	WEEHAWKEN	New York ..	Hull & Sunderland	P. Dover, Jan. 15
SAXOLEINE	Tyne	Philadelphia	Arr. Jan. 4	WILLKOMMEN....	Stockholm	New York ..	P. Dunnet Head, Jan. 10
SEMINOLE.....	—	Muroran	In Port, Jan. 1	WINNEBAGO	and Tyne	Orient	L. Jan. 1
SINGU	—	—	Tr. in East Indies				
SNOWFLAKE.....	Novorossisk	Cette	P. Constant'ple, Jan. 13				

Latest Market Intelligence.

LONDON OIL MARKET.

Supplied by Messrs. Benjamin & Gee, 31, St. Mary Axe, E.C.

January 17th, 1908.

There are no changes to report in the price of Refined Petroleum, which remain as follows:—Russian, 6 $\frac{3}{4}$ d.; American, 7 $\frac{1}{8}$ d.; Water White, 8 $\frac{1}{8}$ d.; Roumanian, 6 $\frac{3}{4}$ d.

LUBRICATING OILS

are unaltered as follows:—

American pale, £7 7s. 6d. to £11.
American dark cylinder, from £9 2s. 6d.
American filtered cylinder, from £11 19s. 6d.
No. 1 Russian, £10 5s.

TURPENTINE.

American Turpentine has been much firmer since our last report, and a considerable rise has taken place, the Spot price now being 39s., and at this price it can be bought for delivery up to the end of June, but for the last six months the quotation is 37s. 6d.

LIVERPOOL OIL MARKET.

January 17th.

Refined oils are quiet, and sellers quote 6 $\frac{3}{4}$ d. for Russian, Galician or Roumanian; and 7 $\frac{1}{4}$ d. to 8 $\frac{1}{4}$ d. per gallon for American.

PETROLEUM SPIRIT continues at 1s. 0 $\frac{1}{2}$ d. to 1s. 3d. per gallon for American deodorised, according to quality on the spot.

LATEST AMERICAN PRICES.

New York, January 16th.

Refined, in cases, is steady at 10'90; Standard White, 8'75; Credit balances, 1'78c.

PHILADELPHIA, January 16th.

Standard White is still quoted at 8'70.

RUSSIA.

BAKU, January 13th.

The Baku oil market remains unchanged. Crude oil, spot, 25 $\frac{1}{4}$ copecs per pood; heavy crude oil, 24 $\frac{3}{4}$ copecs. Kerosene, in waggons, delivery January-February, 34 copecs.

BELGIUM.

ANTWERP, January 12th.

The petroleum market is firm. Price of Standard White, spot, 22 francs per 100 kilos.

FRANCE.

PARIS, January 12th.

Illuminating oil is quoted in bulk, in whole tank waggons, 23 francs per hectolitre; spirit, 34'25 francs per hectolitre. Special white oil, 31 francs per hectolitre.

GERMANY.

HAMBURG, January 12th.

The kerosene market is quiet. The price of American Standard White is 7'55 marks per 50 kilos; Russian, 7'35 marks.

ROUMANIA.

January 12th.

Crude oil from different fields, including	Franks.
pipe line charges, per 100 kgs. ...	4'20-4'25
Refined oil, exclusive of taxes ...	6'50-7'00
Benzine, 717-720, including taxes ...	20'00
Benzine, 750-760 ...	14'00
Residuals in tank waggons, at refinery ...	3'80-4'00
Paraffin ...	120'00-125'00

PRICES FOR EXPORT.

Refined oil in tank waggons, per 100 kgs.	6'50-7'00
Benzine, sp. gr. 0'710-0'715, f.o.b. ...	22'00-23'00
" sp. gr. 0'715-0'720 " ...	20'00-21'00
" sp. gr. 0'730-0'740 " ...	15'00-15'50
" sp. gr. 0'745-0'755 " ...	13'00-14'00

INDIA.

BOMBAY, December 28th.

Standard Oil Co., of New York.

Current rates are:—

American, "Snowflake," 150 deg. ..	Rs. 6 4 2
" Chester, 76 deg. ..	4 12 2
" Monkey Brand, 76 deg. ..	4 4 2
" Bulk, 125 deg. (in local made tins) ..	3 13 6
" " 125 deg. (8 Imperial gallons) ..	3 3 6

The Asiatic Petroleum Company, Limited.

Current rates are:—

Burmah oil, in tins, per pair ..	3 8 0
Russian "Rising Sun," bulk, per unit ..	3 6 0
" " tins, per pair ..	4 0 0
"Anchor" per case ..	4 8 0

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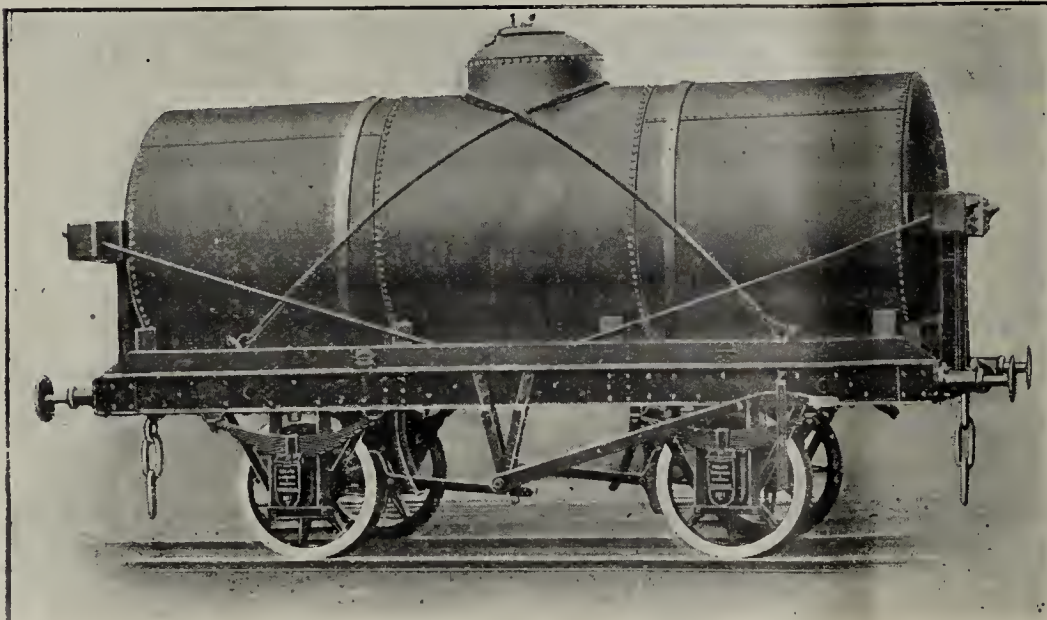
IMPORTS of PETROLEUM into UNITED KINGDOM

Specially prepared for
this Journal by . . .
the Custom House.

FOR THE WEEK ENDED 6TH JANUARY, 1908—

DATE.	PORT AND IMPORTERS.	DESCRIP- TION.	NO. OF GALS.	PORT WHENCE.
Dec. LONDON—				
31	Beck and Pollitzer ..	Lub.	340	New York
31	Scott's Wharf ..	"	1,000	"
31	Fielder, Hickman and Co...	"	8,200	"
31	" ..	"	16,760	"
31	London and India Dock Co.	"	3,200	"
31	" ..	"	5,920	"
31	Anglo-American Oil Co. ..	"	65,600	"
31	" ..	"	15,600	"
Jan.				
1	" (Tuscarora)	Naphtha	820,320	Kustendje
1	"	Benzine	145,760	"
1	Lubricating & Fuel Oils, Ltd.	Lub.	3,120	Philadel.
1	London and India Docks Co.	Fuel	40	Colombo
1	" ..	Lub.	3,560	Hamburg
2	" ..	"	600	"
2	G. and H. Green ..	L.Comp.	4,940	New York
2	Page, Son and East ..	Lub.	600	Antwerp
3	J. Harrison ..	Lub.Gr.	200	"
3	Anglo-American Oil Co. (Tuscarora)	Gas	993,600	Kustendje
3	O. Gerdes Hansen and Co...	Lub.	11,340	Philadel.
4	E. J. Walkenshaw ..	"	10,000	"
4	Anglo-American Oil Co. ..	"	27,400	"
6	" (Iroquois)	Lamp	1,085,990	Philadel. & New York
6	" ..	Gas	1,421,450	"
6	W. H. Muller and Co. ..	Lub.	90	Rotterdam
Dec. LIVERPOOL—				
31	Geo. B. Taylor ..	"	19,880	New York
31	" ..	"	400	"
31	Railton, Campbell & Crawford	L.Comp	330	"
Jan.				
1	Vacuum Oil Co. ..	Lub.	28,800	"
2	C. C. Wakefield ..	"	250	Antwerp
6	Pickfords, Ltd. ..	"	190	"
6	Meade-King, Robinson & Co.	"	20,800	Hamburg
6	" ..	"	10,400	Baltimore
6	Anglo-American Oil Co. (Tioga)	Gas	691,220	Philadel.
6	W. Gibson and Sons ..	Min. Sperm Lamp	2,050	Boston
6	Vacuum Oil Co. ..	Lub.	11,800	New York
6	" ..	Lub.Gr.	510	Gothenburg
6	" ..	Lub.	1,300	Copenhagen
Dec. BRISTOL—				
31	H. Pritchard and Co. ..	"	2,700	New York
Jan.				
2	H. R. James and Sons ..	"	7,920	"
2	First Anglo-Russian Oil Co.	Resid.	620	Hamburg
4	F. Barnard ..	Lub.	12,480	"
CARDIFF—				
2	Homelight Oil Co. (Bloomfield)	Lamp	621,000	Batoum
DATE PORT AND IMPORTERS DESCRIPTION. NO. OF GALLS. PORT WHENCE.				
Jan. GRIMSBY—				
3	J. Sutcliffe and Son..	Lub.	220	Hamburg
3	" ..	"	240	Antwerp
HARWICH—				
2	D. Howard ..	"	140	"
2	" ..	"	170	"
Dec. HULL—				
31	Hull & Netherlands S.S. Co.	"	2,400	Rotterdam
31	Wilsons and N.E. Railway Shipping Co.	"	11,680	Hamburg
31	" ..	"	720	"
31	" ..	"	120	Antwerp
31	" ..	"	10,640	Hamburg
31	T. Wilson, Sons and Co. ..	"	400	Bergen
31	" ..	"	35,930	New York
31	" ..	"	50,760	"
31	W. Gilyott and Co. ..	"	97,520	"
31	" ..	"	2,600	"
Jan.				
3	T. Wilson, Sons and Co. ..	"	600	"
3	British Petroleum Co.(Kura)	Lamp	880,000	Philadel.
Dec. MANCHESTER—				
31	Meade-King, Robinson & Co.	Lub.	10,400	Hamburg
31	" ..	"	8,000	New York
31	G. B. Taylor ..	"	64,000	"
31	Liverpool Storage Co. ..	"	24,840	"
31	W. Hodgson and Co. ..	"	2,650	Riga
31	J. T. Fletcher and Co. ..	"	90	Antwerp
Jan.				
2	Tyne-Tees S.S. Co...	"	2,640	Antwerp
PLYMOUTH—				
2	T. Nicholson and Co. ..	"	200	Hamburg
Dec. SOUTHAMPTON—				
31	American Line ..	"	2,640	New York
GLASGOW—				
31	Anchor Line ..	"	10,330	"
31	" ..	"	62,720	"
Jan.				
2	J. and A. Allan ..	"	56,040	Philadel.
2	" ..	M.Colza	14,000	"
6	Donaldson Bros. ..	Lub.	22,600	Baltimore
6	Anchor Line ..	"	50,730	New York
Dec. LEITH—				
31	G. Gibson and Co. ..	"	520	Antwerp
31	Graham-Yool and Co. ..	Lamp	8,680	Hamburg
Jan.				
1	" ..	"	3,050	"
1	Henderson and McIntosh ..	Lub.	28,220	Philadel.
2	Geo. Gibson and Co. ..	"	6,000	Antwerp
2	J. Currie and Co. ..	"	3,600	Hamburg
Total for Week ..			7,554,370	

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DEPOTS & AGENTS EVERYWHERE IN THE UNITED KINGDOM.

FOR THE WEEK ENDED 13TH JANUARY, 1908—

DATE.	PORT AND IMPORTERS.	DESCRIP- TION.	NO. OF GALLS.	PORT WHENCE.
Jan.	LONDON—			
7	Otto Monsted	Lub.	200	Hamburg
7	London and India Dock Co.	"	440	"
7	T. H. Lee	"	40	"
7	Beck and Pollitzer	"	400	New York
7	Fielder, Hickman and Co...	"	5,280	"
8	Anglo-American Oil Co. ..	"	15,000	"
9	London and India Docks Co.	"	1,000	Baltimore
9	Argo Steamship Co. ..	"	250	Bremen
9	W. H. J. Alexander.. ..	"	10,080	Hamburg
9	Page, Son and East	"	260	Antwerp
9	J. Harrison	"	560	"
11	Scott's Wharf	"	4,000	New York
11	A. Brown and Co.	"	2,800	Philadel.
13	G. Jennings	"	13,280	"
13	Davies, Turner and Co. ..	Lub.Gr.	270	"
13	Lubricating & Fuel Oils, Ltd.	Lub.	12,300	"
13	London and India Docks Co.	Lub. Gr.	1,200	"
13	W. H. Muller and Co. ..	Lub.	600	Rotterdam
13	Lub. and Fuel Oils Co. ..	"	4,100	Antwerp
13	Page, Son and East.. ..	Lub. Gr.	80	"
	LIVERPOOL—			
7	Ismay, Imrie and Co. ..	Lub.	800	New York
7	R. Crooke, Jun.	"	2,000	"
7	Pickford's, Ltd.	L. Paste	400	Hamburg
8	Meade-King, Robinson & Co.	Lub.	10,400	"
8	"	"	2,600	Baltimore
9	Anglo-American Oil Co. ..	Lamp	1,043,160	Philadel.
	(Sun)			
11	Meade-King, Robinson & Co.	Lub.	7,300	New York
13	Valvoline Oil Co.	"	7,790	"
13	Liverpool Warehousing Co..	"	320	"
13	Vacuum Oil Co.	"	35,200	"
13	W. J. F. Meacock	"	2,480	"
13	Geo. B. Taylor	"	54,880	"
13	Worthington and Boler ..	"	6,800	Philadel.
13	A. Hopps and Sons	"	5,200	"
13	W. B. Dick and Co.	"	9,080	"
13	Meade-King, Robinson & Co.	"	32,800	"
13	"	"	10,400	Hamburg
13	Pickford's	"	160	"
	BRISTOL—			
7	Pickford's, Ltd.	"	1,150	"
7	W. Smith and Co.	"	42,160	New York
7	Ford and Canning	"	3,000	"
7	H. R. James and Sons ..	"	10,500	"
7	British Pet. Co. (Terek) ..	Lamp	700,000	"
11	" (Cymbeline)	"	1,657,130	"
	GRIMSBY—			
9	J. Sutcliffe and Son	Lub.	370	Antwerp
9	"	"	210	"
	HARWICH—			
10	D. Howard	Lub.	120	Antwerp
	HULL—			
9	Hull & Netherlands SS. Co.	Tar Oil	2,400	Rotterdam
9	Anglo-American Oil Co. ..	Lamp	960,050	Philadel.
	(Suwanee)			
9	British Petroleum Co. ..	"	756,000	Kustendje
	(Margaretha)			
9	W. Gilyott and Co... ..	Lub.	75,840	New York

DATE.	PORT AND IMPORTER.	DESCRIP- TION.	NO. OF GALLS.	PORT WHENCE.
Jan.				
9	Wilsons and N.E. Railway Shipping Co.	Lub.	8,340	Antwerp
11	"	"	160	Hamburg
	MANCHESTER—			
9	J. T. Fletcher and Co. ..	"	160	Antwerp
9	"	"	230	"
9	D. Currie and Co. ..	"	4,000	Hamburg
	NEWCASTLE—			
9	Tyne-Tees Steamship Co. ..	"	680	"
9	"	"	1,800	Antwerp
11	"	"	5,280	"
11	Furness, Withy and Co. ..	"	9,800	New York
11	J. Arnott and Sons	"	2,260	"
	SHOREHAM—			
13	Anglo-American Oil Co. (Alambic)	Gas	78,200	"
	SOUTHAMPTON—			
9	American Line	Lub.	420	"
	GLASGOW—			
9	Clyde Shipping Co... ..	Lub. Gr.	120	Antwerp
	LEITH—			
9	G. Gibson and Co.	Lub.	360	"
9	"	"	6,000	"
9	J. Currie and Co.	"	240	Hamburg
9	"	"	180	"
9	W. Graham-Yooll and Co...	Lamp	5,010	"
	BELFAST—			
9	J. C. Pinkerton and Co. ..	Lub.	180	"
	DUBLIN—			
7	Alliance & Consumers' Gas Co. (Rocklight)	Gas	1,028,750	Kustendje
	Total for Week		6,665,010	
	Total for the Fortnight ..		14,219,330	

S. J. BURRELL PRIOR,*Suffolk House,**5, Laurence Pountney Hill, Cannon St.,**London, E.C.***TINPLATE BROKERS.****LARGE EXPERIENCE IN TINPLATES FOR OIL.**

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BENZOLINE AND BENZINE, SWANSDOWN WATER WHITE AMERICAN PETROLEUM.**

The Petroleum Review.

By PAUL DVORKOVITZ.

Vol. XVIII. (New Series.)

FEBRUARY 1ST, 1908.

No. 417.

Editorial Notes.

The Making of Oil Storage Tanks. In view of the greatly increased interest which now attaches to the use of liquid fuel in this country by reason that our Admiralty has wholeheartedly gone in for its general use wherever possible, the illustrated article which we publish upon other pages, and which treats with a visit which our representative made the other day to the extensive works of the Whessoe Foundry Co., comes at a most opportune time. The question of the construction of bulk oil storage always possesses a peculiar interest, and now that we are on the eve of remarkable developments in the consumption of oil fuel, that interest naturally becomes considerably enhanced.

Where Independent Refineries Flourish. After all the garbled statements we have heard of late as to the great power of monopoly possessed by the Standard Oil Co. over the American refining industry, it is very refreshing to read a paragraph which appears in the current issue of the American *Mid-Continent Magazine*. There it is pointed out that four years ago there was but one little independent refinery in the south-west, that being at Humboldt. The only other refinery was the Standard plant at Neodesha, Kansas. Now, however, there are twenty-six independent refineries in the south-west, and they are crowded to their fullest capacity. There are refineries at Cherryvale, Atchison, Erie, Paola, Niotaze Longton, Petrolia, Peru, Independence, Coffeyville, Humboldt and Kansas City, Kan., five of them being at Chanute. In Oklahoma there are plants at Chelsea, Bartlesville, Oklahoma City, Tulsa and Muskogee. Then there is the large Standard plant at Sugar Creek, Mo., just outside of Kansas City. "Millions of dollars," continues the writer in the *Magazine*, "have gone into the refining of oil in the south-west during the past four years and there are other millions coming." It is apparent, therefore, that what has been good for the Standard, has likewise had a most beneficial influence upon the independent refining concerns, for of late years these latter appear to have spread throughout the American industry with mushroom-like rapidity.

The American Refined Market in 1907. Throughout the past year the American market for refined oil and products attracted close attention, owing to the unbroken firm upward tendency of prices, covering all of the products, based on strong elements, which influenced several sharp advances in quotations. The demand from the home trade was unusually active and a marked increase in the total

exports compared with those for 1906, upon which we shall speak in our next issue, is noted. The light production of particularly high grade oil for illuminating purposes and the continued smallness of the production in the Russian oil fields, had a marked influence on prices and stimulated the export demand for American refined and products, which shewed no signs of abating, continuing on from the beginning of the month of March. The keen competition among large interests to secure the bulk of crude from producers, which resulted in the holding up of prices for contracts at the wells, served to impart a decided strong feeling in trade circles, which resulted in large purchases to anticipate their requirements ahead at ruling prices. The outlook for the present year is also very favourable for it is doubtful if prices will decline in the slightest for many months.

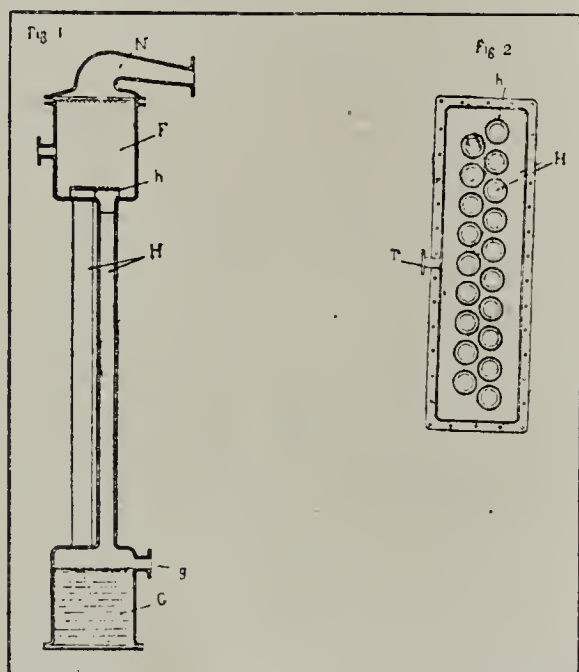
Galician Petroleum Troubles. The petroleum producers and other parties interested in the Galician petroleum industry are still working their hardest to devise means to bring the industry out of the chaotic state into which it has been thrown by the dissolution of the Petrolea Co. The Kreditanstalt, an important Vienna bank, which on a previous occasion had offered to finance the Petrolea Co. to enable it to make advances to the producers on their crude oil, has now decided to establish an independent company for dealing in crude oil on a large scale. The company will have a capital of 2,000,000 to 3,000,000 kronen, and will include among its members the parties who were formerly prepared to finance the Petrolea Co. The company will have at its disposal a large number of tank waggons and will direct its attention chiefly to promote the rise of oil for fuel purposes. With the railway rate reductions which the Government has promised to grant on fuel, it is expected that the use of liquid fuel will increase very largely in Austria-Hungary, and thus by absorbing the surplus production will bring the petroleum industry back to normal conditions. The company will also sell crude oil for refining purposes. The Petrolea Co., which has for some time been acting as joint selling organisation of the bulk of the producers, has since last August, when its contracts with the producers were dissolved, been acting merely as a pipe line and storage concern.

American Petroleum Exports during November. The American exports of petroleum products are gradually returning to their normal level, and those for the month of November shewed an increase of over 3,000,000 gallons over the October exports. Thus for the fourth time in 1907 the exports from America passed the 100,000,000 mark, though in 1906 the exports were over this figure upon five occasions. One of the chief characteristics in the detailed figures is the rise of Sabine, though in the information published upon

another column these exports come under the head of Galveston. Month by month there is an increasing demand experienced for Gulf coast oil on the part of England, for our navy is now utilising not inconsiderable quantities of residuum for fuel upon the new men-o'-war. During November the shipments from Sabine were between 7,000,000 and 8,000,000 gallons, and it is these increasing foreign shipments of Gulf coast petroleum and its products that has caused Sabine to be registered as a customs port of South-eastern Texas. In benzine and illuminating oil, the November shipments shewed remarkable advance upon those for the corresponding month of 1906. No less than 3,000,000 gallons of naphtha were exported, as compared with one-sixth of the quantity for November, 1906, while in the case of illuminating oil the shipments were 4,000,000 gallons in excess of those of a year ago, the total shipments compared with the corresponding month of the previous year having advanced by over 7,000,000 gallons.

THE CONTINUED PROCESS FOR THE "CRACKING" OF HEAVY PETROLEUM.

A French patent has recently been granted to Mr. E. A. Barbet for an apparatus with which instead of "cracking" petroleum residues in the usual manner in a cast-iron still known as the "black pot," they are run continuously from the rectifying still into the apparatus shewn in Figs. 1 and 2. It consists of upper and lower chambers, F, G, connected by cast-iron pipes H, and having the upper chamber F, surmounted by a still head, N. The apparatus is fixed between the furnace and the boiler of the rectifying still, so that it receives



the first impact of the hot gases, the heating effect being further increased by a wall of pigeon-hole brickwork built between the apparatus and the boiler, the latter being heated by the waste flue gases from the apparatus. The oil from the still enters through the pipe *v*, and is equally distributed between the pipes, H, by the constant-level pieces, *h*. As the oil trickles down the pipes, H, it is "cracked" by the intense heat, and the vapours pass away by the still-head, N, to the condenser. The carbon, or coke formed is deposited in part on the sides of the tubes, but the larger portion is carried down by the excess of oil to the lower chamber, G, from which it is from time to time removed. The excess of oil flows

out at *g*, and is returned to the upper chamber by an emulsifying injector actuated by steam. The apparatus is worked in pairs so that one set of tubes can be cleaned without stopping the process. The cleaning which is claimed to be very easy and to be one of the features of the invention, is performed by taking off the still-head, N, removing the pieces, *h*, and boring out the coke from above with an auger.

BAKU PRODUCTION IN 1907.

The total production of the Baku oil fields was distributed among the various firms operating there, as under:—

	Poods. 1907.	Poods. 1906.
Nobel Bros.	64,692,000	53,755,000
Caspian and Black Sea Society ..	36,394,000	29,628,000
Mantascheft Co.	25,290,000	23,172,000
Baku Naphtha Co.	24,510,000	25,388,000
Caspian Society	22,579,000	24,883,000
Mirzoeff Bros.	15,066,000	12,923,000
Russian Naphtha Co.	13,893,000	12,501,000
Pitoeft and Co.	13,746,000	13,882,200
Baku Russian Petroleum Co., Ltd.	13,204,000	11,526,000
Aramazd Co.	13,120,000	13,084,000
Moscow Caucasian Co.	13,035,000	23,528,000
Zoubaloff	12,964,000	13,635,000
Schibaieff Petroleum Co., Ltd. ..	12,895,000	9,634,000
Naftalan Co.	11,636,000	9,208,000
Russian Pet. & Liquid Fuel Co. Ltd.	10,491,000	10,488,000
Bibi-Eybat Petroleum Co. Ltd. ..	10,419,000	7,588,000
Nagieff	9,772,000	10,661,000
Neft Co.	8,490,000	6,471,000
European Petroleum Co. (approx.)	7,119,000	5,013,000
132 Other Firms	135,585,000	129,091,800
Total	474,900,000	446,100,000

CONCILIATION BOARD SUGGESTED FOR BAKU.

For over three months the workmen at Baku have been discussing the question of creating a conciliation board to settle all differences between employers and workmen. The local trade unions have worked out a scheme in accordance with the decision at the St. Petersburg (1906) Conference, which Mr. Brailovsky, Chief Factory Inspector for Baku, submitted to the Viceroy, who decided that the scheme should be elaborated jointly by the masters and men. It is proposed that every 100 workmen should elect a delegate, and these delegates to elect from among them 16 representatives for a conference. A similar number of representatives is to be elected by the employers. This committee of 32 was to commence sitting at the end of this month.

PRODUCTION OF ENGLISH COMPANIES IN RUSSIA.

BAKU RUSSIAN PETROLEUM Co., LTD.—The production for the week ended January 18th was 220,000 poods, or 3,546 tons; and for the week ended January 25th was 227,000 poods, or 3,659 tons.

RUSSIAN PETROLEUM AND LIQUID FUEL Co., LTD.—The production for the week ended January 19th was 269,000 poods, or 4,337 tons; and for the week ended January 26th was 241,000 poods, or 3,885 tons.

SPIES PETROLEUM Co., LTD.—The output for the week ended January 19th was 130,445 poods, or 2,103 tons; and for the week ended January 26th, 139,030 poods, or 2,242 tons.

THE EUROPEAN PETROLEUM Co., LTD.—The production for the week ended January 19th was 118,119 poods, or 1,904 tons; and for the week ended January 26th was 120,629 poods, or 1,945 tons.

THE HOME OF OIL STORAGE TANKS.

A VISIT TO THE WORKS OF . . .

. . . THE WHESOE FOUNDRY COMPANY.

(By OUR ROVING COMMISSIONER.)

The remarkable growth which the petroleum trade has made in this and other countries during the past half a century is amply exemplified by the almost



ENTRANCE HALL.

phenomenal progress made by the Whessoe Foundry Co., Ltd., whose name in the two hemispheres is quite a household one. But long before the trade in petroleum and its products began to assume any degree of commercial importance, the Whessoe Foundry Co. was slowly yet unostentatiously laying the foundations of its subsequent greatness, for it was established as far

back as 1790 in the town which to-day recognises the company as one of its most important commercial concerns. Therefore Darlington—the home of railways—for it was here that George Stephenson, the practical inventor of the steam engine, found a sympathetic friend whose assistance enabled him to demonstrate the utility of his invention in the face of much hostile criticism—can also claim to be the home of the building of oil storage tanks.

In its early days the Whessoe Foundry Co., then known under another name, was chiefly remarkable for the production of light iron castings, but always keeping abreast with the times its output has found highly diversified applications, until to-day not only is the name synonymous with the construction of bulk oil storages,

and the making of oil refinery plant, but the company is famous throughout the world as manufacturers of every description of gas plant, from retorts to gigantic gas-holders, bridge and roof constructors, weighing machines, steel buildings, girders, and all kinds of engine and general castings, though these by no means exhaust the list of the firm's productions.

As shewing the prominent position occupied by the Whessoe Foundry Co. to-day, it may interest our readers to here mention that apart from the building of oil storages for all parts of the world, and reference to this matter will be made later, the firm has carried out large contracts during the past few years for the manufacture of some tens of thousands of tons of cast-iron segments used in the construction of several of the "tube" railways which intercept London in all directions, they have supplied iron-work for piers at many seaside resorts, including East-

bourne and Bournemouth, built and erected oil refineries for every oil company of note at home and abroad, and gas plants for municipal corporations in all parts of the world.

But it is particularly in regard to the firm's connection with the oil trade of this and other countries that we would more especially speak, and it was with a view to furnishing readers of the REVIEW with interesting



GENERAL VIEW OF OFFICES.



COMMERCIAL OFFICE.

information in this direction that our Roving Commissioner paid a visit to Darlington a few days ago, in order to make a tour of that not inconsiderable part of that old-fashioned market town, which is occupied with the works and erecting yards of the Whessoe Foundry Co. The builders of the first bulk storages erected upon the banks of the Thames many years ago, and of the large portion of storages erected since that time, the company has recently been entrusted with the work of building and erecting the whole of the bulk oil storages required for the Admiralty for its oil-fuel depôts along the south coast, and it says much for the appropriateness of the visit made by our representative to the company's works when we mention that it coincided not only with the production of portions of this large order in the works, but also with the temporary erection of some of the more advanced oil storage tanks in the erecting yards, prior to dispatch for Portland and Portsmouth.

convenience. The entrance waiting hall, some 20 feet in diameter, is of octagonal shape, open to the roof, being surmounted by a large domed ceiling light of coloured glass, and the design of the reception hall, and also the numerous adjoining offices, is of a most attractive nature.

But it is in regard to the works themselves that we would dwell in greater detail. The works themselves cover an area of something like 13 acres, and occupy an exceedingly valuable site running parallel with the North-Eastern Company's main line, and connected with it by many sidings, which admit the expeditious unloading of material by means of the company's own locomotives and travelling cranes, as well as rendering the rapid dispatch of finished goods to all parts of the kingdom a very easy matter.

It was the good fortune of the writer to be taken



ONE OF THE PLATING AND PUNCHING SHOPS.

It is impossible here to chronicle even the minor portion of what our representative saw in those extensive works at Darlington in regard to the making of bulk oil storages, yet the following brief description, together with the photographs, will tend to afford an illustration of the interesting nature of the work, and, at the same time, will go a long way to shew the important and necessary work carried out by the Whessoe Foundry Co. in connection with the progress of the world's trade in petroleum and its varied products.

From time to time, as growing demands have necessitated, the premises of the Whessoe Foundry Co. have been enlarged, the latest addition having been made a year or two ago when new general offices were erected for the reception of the company's large clerical and engineering staffs. These handsome and commodious buildings, of which a few illustrations are here given, are situated immediately upon the left of the main entrance gates, and are replete with every possible

through the whole of the company's extensive departments by the works manager—Mr. Alfred Coates—and he would here express his thanks for the very courteous treatment he received. Each department was in turn inspected, all having their interesting tale to tell the visitor, and, amid the incessant din of hammer and forge, Mr. Coates explained the various processes necessary in the manufacture of the large oil storage tanks, ere they are brought to that complete state of perfection which permit of their leaving the works ready to be erected—it may be in England, or thousands of miles away.

One of the most interesting phases of the work which appealed to the writer was the punching of the rivet holes in the gigantic plates for the oil tank sides. Just at the time of the visit, the workmen were busily engaged in the punching department upon many of the plates for the large 6,000 ton tanks which the company is now constructing to the order of the Admiralty for



4,000-TON OIL STORAGE TANK TOP IN COURSE OF CONSTRUCTION IN ERECTING FIELD.



VIEW IN ERECTING FIELD SHEWING LARGE STEEL OIL STORAGE TANKS IN COURSE OF CONSTRUCTION.

erection at Portland and Portsmouth. The plate is carried by a travelling crane to a punching machine, and there, by



A BAY IN THE FITTING SHOP.

carried out in a manner which will lead to no complaints hereafter.

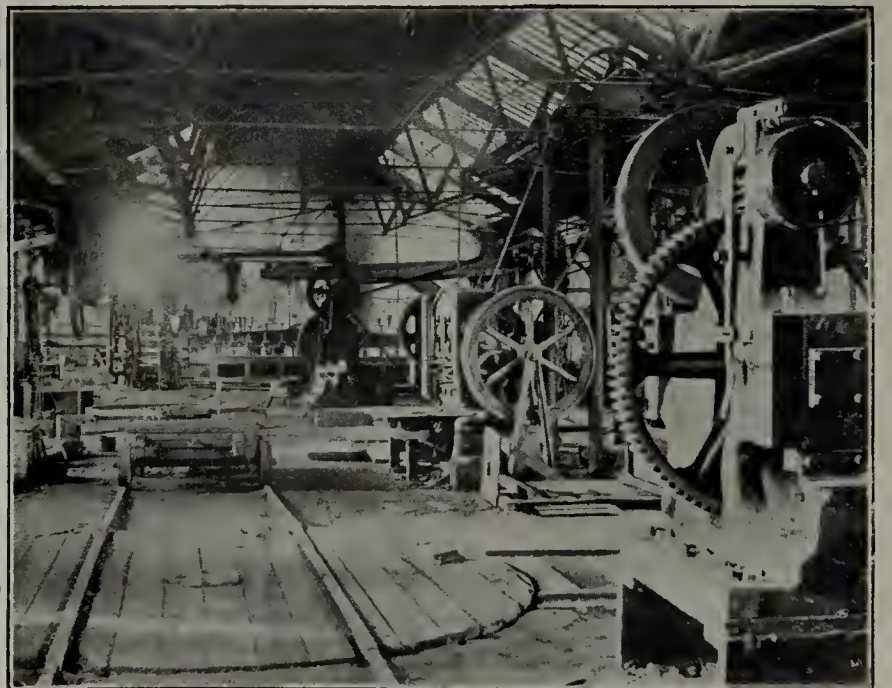
When the punching has been performed, the plates then pass to another department, where the various holes are countersunk in order to allow the close fitting of the rivets, and after this operation is completed, the plates make their way to another department where immense machines give to the plate its desired radius for the side of the oil tank. Among the vast quantity of up-to-date machinery, one immense punching machine was pointed out to the writer which is capable of punching no less than 61 neat holes in one operation, and the apparently easy way in which this machine forces holes through plates causes one to reflect upon the perfection now achieved in labour-saving machine construction.

Leaving this interesting department behind we enter the girder shop, which during the alterations and extensions of a couple of years ago was made double



4,000-TON TANK BOTTOM IN COURSE OF CONSTRUCTION.

careful manipulation, the rivet holes are punched with a rapidity which is little less than marvellous. And so true are the completed holes in their distance one from the other that when finished the plates are quite interchangeable—it matters not which position they occupy in the erected tank, the rivet holes will, to a nicety, fit the adjoining plates. The full significance of this cannot be readily understood by the reader, however much it is appreciated by the tank erector in various parts of the world. So perfect is the punching carried out that one cannot but marvel at the fact that it is the result not of mechanical devices, but the perfection achieved is due solely to the great care exercised by the responsible workmen. When the plate has been punched, it is placed upon others of similar size which are ready to undergo the same operation, and the positions of the holes punched are marked upon the plate to be perforated. This simple guide, however, needs the assistance of the experienced eye of the workman in order that the punching of the plates may be



VIEW OF PLATE PUNCHING SHOP.

its former size. Here quite a miniature army of men are busily engaged upon the various orders which

concurrently pass through this department. Overhead travelling electric cranes, capable of moving 15 tons, move along in almost noiseless manner, and their movements are in strange contrast to the incessant din created by the modern radial drills, the edge-planing machines, etc., which are also located in this "shop." One of these edge-planing machines is busy upon a number of iron plates for an Admiralty oil tank, and the way in which its cutters go through the metal, leaving the cut edge as smooth as polished mahogany, causes one to pay more than passing attention to these cumbersome, though very necessary, machines.

But we continue our journey through the other various and all well-equipped departments of the Whessoe works. The machine shop with its multifarious lathes, slotting, shaping, boring, and drilling

turn our attention to several large cylindrical oil storage tanks which are about completed for rail transport. Pneumatic hammers are at work upon the last few rivets, and this work being completed, the huge cylinders are in readiness for the test. It is just possible to transport these tanks upon special cars by rail already rivetted up, and consequently when they leave the Darlington works they are ready to take up their positions at the numerous oil depôts one sees at country railway goods' yards. It is an open secret that the Whessoe Foundry Co. has constructed and despatched some thousands of these cylindrical tanks during recent years.

But if there be one spot in the whole of the Whessoe works more interesting than another to the oil man, it is that portion of the yard devoted to the erection of the



THE ERECTING SHOP FOR LIGHT WORK.

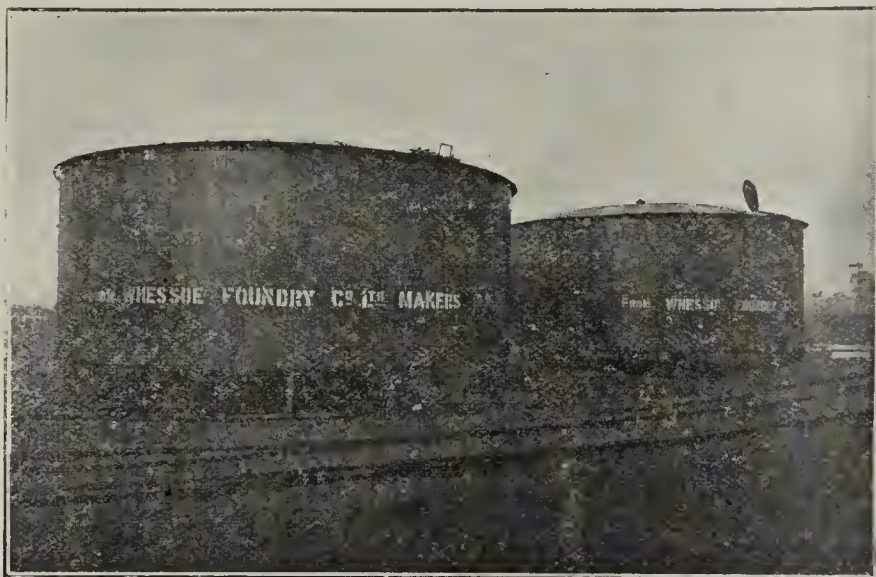
machines, and an automatic machine for dealing with segments, which it is superfluous to state are turned out in exceptionally large quantities, now claims our attention, and here we are amazed at the activity displayed by one insignificant-looking machine, whose circular saw is cutting in two the roofing supports of oil tanks, several inches thick, with apparently perfect ease. The smiths' shop is next visited and in the ruddy glow of some twenty smiths' fires, to the rude accompaniment of several ponderous steam hammers, Mr. Coates continues his lucid explanation of the important work for which this department is responsible.

By way of a change, we now emerge into the open yard, an extensive area principally utilised for the temporary erection of the gigantic oil storage tanks for which the firm is famous all the world over. As we pass from the shops into the open air we momentarily

oil storage tanks. Tanks from 4,000 to 10,000 tons capacity can frequently be seen here receiving their finishing touches before transportation. As may be seen from some of the photographs here given, at the time of the writer's visit one of the Admiralty's 6000-ton tanks was being erected—the floor, or bottom, in one part of the yard, and the top, sides and roof in another. Only those who have actually seen the tanks in course of erection can form anything like an adequate idea of their immense size and the great amount of care which has to be brought into their design or construction. The bottom of a tank when resting upon its wooden foundation posts reminds one of some huge theatre stage of iron. When it is recollected that in the completed structure some hundreds of thousands of iron bolts are used in bolting the various plates together, the great organisation which must be necessary in a works where such

gigantic oil reservoirs can be turned out in a few months ready for transport, will easily be imagined. But oil storage tanks by no means are the only products of the Whessoe Foundry Co. that are to be seen temporarily erected in this extensive yard—or to be more exact, erecting field. Immense bridges are being erected for testing purposes, tanks and gas-holders destined for Yokohama and New South Wales are being got ready for shipment, and orders for the South African gold-fields are taking their place alongside others for Madras and Calcutta. And how smoothly does the work proceed! The writer is about to remark upon this to his courteous guide, when a shrill whistle from an approaching engine drawing a train load of girders, pit head gears, and cyanide tanks reminds him that it is not safe to stand with one's back to a locomotive.

We now make our way to a corner of the yard where



TANKS ERECTED IN YARD WAITING SHIPPING INSTRUCTIONS.

the large weighing machine shop is situated, and where, just at the present time, what is probably the largest railway weighing machine is being constructed to weigh up to 150 tons with a 60-foot platform.

Mr. Coates informed the writer that there was much more yet to see in the works which find regular employment for some 700 men, but as the hour for lunch was upon us, we postponed further inspection for a future occasion.

What was seen, however, left a lasting impression upon the writer, that thanks to the efforts of the company's managing director—Mr. Thomas Coates—and the chairman—Mr. H. S. Smith-Rewse, who represents the company at its London offices at 106, Cannon Street, the Whessoe Foundry Co. has, throughout the wide world, achieved a reputation, especially as storage tank builders, of which they may feel justifiably proud.

PETROLEUM IN COREA.

According to a recent report by the United States Consul-General at Yokohama, a charter has (says the *Board of Trade Journal*) been granted to Mr. Nishizuka Toyosaburo and two other Japanese residents in Seoul to work a petroleum deposit in Chyong-ju, in North Phyang-an Province, Corea. The area is stated to extend over 439,470 tsubo (tsubo=3'9538 square yards) in all. This is said to be the only petroleum yet discovered in Corea.

THE HOMELIGHT OIL COMPANY, LIMITED.

STAFF DINNER AT MANCHESTER.

The third annual dinner and social evening in connection with the Manchester branch of the Homelight Oil Co., Ltd., was held at the Mitre Hotel, Manchester, on the 17th ult., and, like its predecessors, proved of a most enjoyable nature.

The Manchester manager of the company (Mr. G. H. Watson) took the chair, and in the vice-chairs were Alderman N. Ramsden (Bolton) and Mr. G. A. Dickin, while the company included Mr. J. B. McClurg, general manager of the Homelight Co., and Dr. Paul Dvorkovitz.

After dinner, a well-arranged toast list was gone through, this being agreeably interspersed with songs and recitations. The Chairman proposed "Continued success to the Homelight Oil Co.," and Mr. J. B. McClurg fittingly replied. The response to the toast of "The visitors," rested with Dr. Dvorkovitz, Mr. A. Lloyd (West Bromwich) and Mr. J. Dunn (Manchester), all of whom spoke of the pleasure it gave them to participate in the good things always associated with the Manchester staff dinner.

BAKU PRODUCTION DURING DECEMBER.

The total production of crude oil at the Baku oil fields in December, according to official statistics just to hand, amounted to 41,249,000 poods, of which 2,925,000 poods were produced by spouters.

The production in December of the leading firms was as under:—

	Poods.
Nobel Bros.	6,500,000
Caspian and Black Sea Society	3,000,000
Mantascheff and Co.	2,500,000
Caspian Society	2,300,000
Neft Co.	1,400,000
Baku Naphtha Co.	1,300,000
Mirzoeff Bros.	1,300,000
Aramazd Co.	1,300,000
Russian Petroleum and Liquid Fuel Co., Ltd.	1,200,000
Russian Naphtha Co.	1,200,000
Baku Russian Petroleum Co., Ltd.	1,100,000
Bibi-Eybat Petroleum Co., Ltd.	900,000
Moscow-Caucasian Co.	900,000
Schibaieff Petroleum Co., Ltd.	900,000
Zoubaloff	900,000
Pitoeff and Co.	900,000
Naftalan Co.	800,000
Nagieff	800,000
Shikhovo Co.	600,000
Dotchar	600,000
Tiflis Co. (Bebe-Aibat)	500,000
Melikoff and Co.	500,000
Ter-Akopoff	500,000

Batoum Shipments.—The following were the shipments of various petroleum products from Batoum during the period from 30th December to 5th January (o.s.), 1908 (in poods):—

	Illuminating Oil.		Other Products.	
	1907.	1908.	1907.	1908.
To Europe ..	318,000	264,000	351,000	416,000
To the East ..	295,000	319,000	—	1,000
To Russian Ports:	—	103,000	3,000	—

THE BAKU PETROLEUM INDUSTRY DURING 1907.

A BRIEF RETROSPECT.

In looking back over the past year we are confronted by the fact that the output of crude oil in 1907 has increased but slightly as against that for 1906, namely, about 475,000,000 poods, as against 448,000,000 poods. The increase thus amounts to only 28,000,000 to 30,000,000 poods, or less than 10 per cent. This fact, which made itself sufficiently clear during the year, exercised its influence on the market, giving it a firm and upward tendency.

The production month by month was as follows (in round figures):—

	Production By Baling. Poods.	Production By Spouters. Poods.	Total. Production. Poods.
January ..	35,900,000	2,300,000	38,000,000
February ..	36,100,000	1,600,000	37,700,000
March ..	40,300,000	600,000	40,900,000
April ..	37,900,000	1,300,000	39,200,000
May ..	39,400,000	100,000	39,500,000
June ..	39,400,000	500,000	39,900,000
July ..	41,700,000	300,000	42,000,000
August ..	39,300,000	900,000	40,200,000
September ..	37,000,000	900,000	37,900,000
October ..	39,700,000	200,000	39,900,000
November ..	38,100,000	200,000	38,300,000
December ..	38,300,000	2,900,000	41,200,000
Total ..	463,100,000	11,800,000	474,900,000

The trade of Baku in 1907 is shewn in the following figures of the quantities of various products despatched from Baku during the first eleven months of 1907, as compared with the corresponding period of 1906:—

	11 Months, 1907. Poods.	11 Months, 1906. Poods.
Illuminating Oils ..	87,256,795	66,874,786
Lubricating Oils ..	13,440,557	14,126,688
Residuals ..	248,884,121	202,979,581
Crude Oil ..	34,466,066	31,844,134
Other Products ..	4,479,352	1,455,998
Total ..	388,526,891	317,281,126

According to the destination and the mode of transport, the deliveries from Baku during the first eleven months of the year were divided as under:—

	11 Months, 1907. Poods.	11 Months, 1906. Poods.
By Transcaucasian Railway—		
To Batoum ..	35,912,570	31,276,899
„ Other Caucasian Towns	13,624,270	15,214,354
By Baku-Petrovsk Railway ..	5,608,264	2,376,057
„ Caspian Sea—		
To Astrakhan ..	313,744,914	249,680,856
„ Petrovsk ..	5,448,302	4,079,166
„ Transcaspien Province	7,382,436	8,094,302
„ Other Russian Ports ..	3,435,083	3,301,556
„ Persia ..	1,295,647	1,221,204
By Cart ..	2,075,402	2,036,732
Total ..	388,526,891	317,281,126

It will be observed from the figures of the production that the monthly output has varied but very little in the course of 1907, and kept very close to the fatal figure of 40,000,000 poods, which, of course, is quite insufficient to satisfy all the needs of the market which Baku has to supply. For that purpose about 50,000,000 poods per month are required.

The causes of this restricted output are various.

Labour troubles continue to do a great deal of harm to the Baku industry, and throughout 1907 partial strikes were always in progress on the properties of one or more firms, while there were several attempts at general strikes throughout the fields. Nor must we forget to mention the general strike of the crews and officers of the Caspian tank fleet. An idea of the effects of these strikes upon the course of the industry may be gathered from some statistics on the subject compiled by the Council of the Baku Petroleum Association. According to these statistics the number of days during which wells have been standing idle during the first nine months only of 1907 was 30.678, of which 20.627 days fall to the share of producing wells and 10.051 days to wells in course of drilling or deepening. Calculated on the total possible output for the nine months only this represents a loss of 6.9 per cent. Apart from the loss of production which the idle wells represent, the continual strikes cause disorganisation throughout the industry, preventing its taking a normal course of development.

As far as the trade in oils was concerned, more particularly the home trade, of far greater consequence than the oil fields strikes, was the shipping strike on the Caspian Sea, which for two months delayed the commencement of shipments of oil from Baku to Astrakhan. The loss of two months out of the navigation season of barely seven months during which the Russian home market has to procure its supplies of liquid fuel and other oils from Baku, was a serious matter, and the fleet had to be worked to its utmost capacity during the rest of the navigation in order to at least partly make up for the time lost. Thanks to favourable conditions this was done to some extent. During the whole of the navigation season of 1907 there were shipped from Baku to various points on the Volga about 337,000,000 poods as against 226,000,000 poods in 1906, and 320,000,000 poods in 1905. This figure is, however, still considerably below the requirements. The result has been that many consumers of liquid fuel have had to fall back on coal, wood, or peat fuel, and should the Baku industry ever regain its former productive capacity, it will find it very hard to regain the markets thus lost. There are certain industries, however, prominently among which is the Volga shipping trade, that must necessarily use liquid fuel, there being no other fuel available. These industries have raised an outcry against the inflated prices of oil fuel which are ruining them; they have overwhelmed the Government with petitions for help and suggestions as to the form this help should take. Extremists even went to the length of urging the Government to turn the Baku petroleum industry into a State monopoly. More moderate minds recommend that the Government should take the royalties due to them from the lessees of the State petroliferous lands in kind and use the

very large quantity of crude oil which would thus come into their hands, in the first place to satisfy the needs of the State railways in liquid fuel and thus take the largest buyers off the market, and, in the second place, use the surplus oil to regulate prices. They also recommend to enlarge the productive area of the oil fields by leasing out fresh plots of the still undeveloped Government lands. All these questions have been discussed over and over again at special conferences and departmental committees in St. Petersburg, and decisions come to, but so far but little has been done towards their realisations. One of the few solid facts to record is the coming draining of a portion of Bebe-Aibat Bay. The work is about to begin, but it will be a long and difficult one, and it will be some years before the plots so reclaimed can contribute to the production.

Things move more slowly in Russia than in western countries, and as a further instance of this we may mention the labour troubles at Baku. For some time it has been within the power of the Government and the producers, who are both equally interested in the welfare of the petroleum industry, to provide means to avert or minimise the effects of strikes by creating a conciliation board at Baku, at which both employers and employes were to be represented. An agreement

to this effect was arrived at at a special conference in St. Petersburg, at which representatives of the men were present. Up to the present this has not been done. Some facts about this matter will be found on another page of this paper.

As is usual in times of stress and trouble everywhere, at Baku it is the small people mostly who have gone to the wall, whilst the large firms have not been seriously affected, and in many cases have benefited by the misfortunes of the smaller people. The figures of the production by firms, which we publish on another page are instructive in this respect.

In conclusion we give the average monthly spot prices of various oils at Baku (in copecs per pood):—

	Crude at the Wells.	Residuals in Ships.	Kerosene in Waggon. (For Export)	Kerosene in Ships. (For Home Trade.)
January ..	24'10	26'46	26'72	26'84
February ..	25'67	27'83	27'00	28'00
March ..	26'56	28'8	29'98	—
April ..	27'35	29'05	—	—
May ..	28'59	31'05	—	33'25
June ..	30'54	31'97	38'78	37'98
July ..	31'75	31'87	43'14	43'05
August ..	31'76	30'88	—	44'33
September ..	30'66	30'38	37'00	40'3
October ..	25'68	27'53	32'00	34'65
November ..	24'21	25'57	33'18	34'3
Dec. (unofficial)	25'5	26'00	35'00	35'00

THE OPERATIONS OF THE BAKU REFINERIES.

STATISTICS FOR APRIL, MAY, JUNE, 1907 (in poods).

I.—MANUFACTURE OF ILLUMINATING OILS.

Distillation.

Submitted to Distillation.			Products Received.					
	Crude.	Other Products.	Total.	Kerosene.	Residuals.	Other Products.	Loss.	Fuel used.
April	23,232,797	171,359	23,404,156	6,602,637	15,297,516	976,101	527,902	635,567
May	30,514,929	227,326	30,742,255	8,635,354	20,284,991	1,139,716	682,184	812,912
June	28,064,973	202,814	28,267,787	8,322,070	18,237,283	1,087,878	620,551	756,691
Six Month, 1907 ..	147,531,086	1,359,414	148,890,500	41,330,991	97,819,862	6,296,573	3,443,074	4,234,747
Six Month, 1906 ..	155,955,316	1,235,273	157,190,589	37,295,853	108,158,419	6,712,275	5,024,042	4,710,488

Refining.

Submitted to Refining.			Refined Products Obtained.				Chemicals used.	
	Kerosene	Other Distillates.	Total.	Kerosene	Other Products.	Total.	Loss in Refining.	Acid. Soda.
April	7,306,960	67,366	7,374,326	7,122,006	55,930	7,177,936	196,390	33,371 12,704
May	8,415,896	18,500	8,430,996	8,199,255	13,024	8,212,279	218,717	36,345 14,630
June	8,460,832	12,834	8,473,666	8,229,192	11,266	8,240,458	233,208	41,377 76,000
Six Month, 1907 ..	41,152,570	346,544	41,499,024	40,124,866	305,080	40,429,946	1,069,078	210,749 —
Six Month, 1906 ..	37,431,586	207,859	37,639,435	36,566,087	184,385	37,750,422	889,013	154,423 62,964

II.—MANUFACTURE OF LUBRICATING OILS.

Distillates Received.

	Machine Oil.	Spindle Oil.	Cylinder Oil.	Goudron.	Solar Distillates.	Residuals.	Other Distillates.	Loss in Distilling.	Fuel used.
April	842,118	52,197	37,884	1,246,412	807,970	482,952	60,182	161,375	450,225
May	1,185,103	162,252	56,549	1,724,433	1,007,570	606,978	83,428	216,789	582,247
June	1,083,042	117,728	49,755	1,761,237	645,831	335,516	65,039	510,981	524,825
Six Months, 1907 ..	5,607,497	664,714	291,777	8,394,682	5,590,342	2,570,241	393,545	1,168,309	3,059,026
Six Months, 1906 ..	6,566,912	759,685	298,244	6,160,674	3,733,439	3,073,421	267,288	1,700,133	3,039,009

Refined Products Received.

	Spindle Oil.	Machine Oil.	Cylinder Oil.	Loss in Refining.	Chemicals used.	
					Acid.	Soda.
April	89,233	863,166	35,313	116,010	27,970	3,874
May	92,218	1,045,002	21,979	145,508	37,542	5,439
June	110,252	948,028	40,235	139,361	32,674	7,353
Six Month, 1907 ..	621,868	5,071,688	187,754	704,138	175,375	26,841
Six Month, 1906 ..	668,775	5,690,702	221,656	734,550	199,997	25,946

III.—MANUFACTURE OF BENZINE.

	Light Gasoline Submitted to Distillation.	Distillates Obtained.			Loss in Distilling.	Refined Benzine Obtained.	Loss in Refining.
		Benzine.	Heavy Gasoline.	Kerosene.			
April	44,968	24,057	19,584	—	1,327	16,679	280
May	54,790	32,367	21,133	—	1,290	28,897	558
June	64,917	25,196	28,129	9,622	1,970	45,796	1,311
Six Months, 1907 ..	305,640	151,733	134,848	9,622	9,447	169,927	4,329
Six Months, 1906 ..	413,769	175,243	223,427	—	10,099	188,877	4,916

CORRESPONDENCE.

THE USE OF LIQUID FUEL IN ELECTRIC POWER STATIONS.

To the Editor of the PETROLEUM REVIEW.

It is not sufficiently well known that, besides the crude petroleum and petroleum residues, there are other by-products which serve quite well for liquid fuel. Water-gas, tar, blast-furnace oil, the by-product from producer-gas plants, and other hydrocarbons are all available for fuel if properly used with suitable burners. It is true that a sprayer fitted over the furnace door of a coal-fired boiler will help matters when there is a sudden demand for steam, but this is not the best way to meet the case if smokeless combustion is aimed at.

Being interested as inventor and maker of all kinds of liquid fuel burners, etc., the question of how best to deal with various electric power stations in London was submitted to me professionally three years ago, when the price of coal was not as high as it is at present, and although an actual saving in cost of fuel could not then be shewn if oil-fuel at 35s. per ton was used, there would, nevertheless, have resulted economies in other directions. The difficulty of making suitable contracts for the supply of oil fuel over a term of years, and also the difficulty of overcoming a considerable reluctance or prejudice to abandon the use of coal, lost me some important contracts for oil-fuel appliances. Since then the price of coal has gone up very much, and it is safe to say that any power station in London could be entirely fired with liquid fuel at the present moment and shew a saving as against coal, provided the price of oil fuel in London is no more than it was three or four years ago.

The supply of oil fuel for the use of London power stations is having attention by at least one oil fuel supply company, and in the near future London stations may easily obtain supplies of oil fuel at prices which will make coal too dear to use.

The cost of the appliances which would be necessary for the successful adoption of oil fuel for steam raising would not be great, as the general arrangement of the furnace with ordinary firebars as used for coal will serve without alteration, and this would admit of coal being reverted to temporarily should circumstances call for this.

It is remarkable that little interest is taken in the use of liquid fuel by engineers generally, but this is steadily passing away, and in the near future liquid fuel and smokeless combustion will I feel sure form a very attractive and economical feature of every power station in London.

Pending the change in the attitude of engineers towards liquid fuel for steam-raising purposes, great strides are being made in its application to furnaces of all kinds for industrial processes, where it is valuable on account of economy of working, the perfect control over temperature, and its perfect combustion.

For process work liquid fuel is capable of doing from three to four times the work of coke or coal, pound for pound, and for electric power station work it will do

twice the work of coal, all things being considered, and the absolute cleanliness and freedom from dust attending its use makes it an ideal fuel for station work.

Some of the London power stations that I have inspected are cumbered with coal conveyors and elevators and with mechanical stokers, all of which are expensive to install and somewhat costly to maintain in good working order. The introduction of oil fuel would do away with these costly appliances, it would simplify the arrangement of the station, and it would reduce the number of the fire-room attendants.

Where liquid fuel is used the output of a boiler may be increased by at least 30 per cent. as a normal figure beyond what it accomplishes with coal, and the fires can be regulated in a moment to meet the demand for extra power, or they can be reduced as readily to any degree or extinguished altogether.

The ease with which the oil fuel can be pumped from point to point without the need of costly and complicated machinery for the purpose, and the ease with which it can be stored in suitable tanks, should certainly claim the attention (with its other advantages) of all electric power station engineers.—Yours etc.,

J. J. KERMODE, M.I.MECH.E.

Liverpool, Jan. 20th, 1908.

AMERICA'S EXPORTS OF PARAFFIN WAX.

The American exports of paraffin wax during November, as compared with the same month for the preceding year, were as under (in pounds):—

Exported to—	1906.	1907.
United Kingdom.. .. .	10 302,323	9,266,321
Belgium	145,337	74,875
France	76,140	—
Germany	1,277,287	506,968
Italy	1,670,553	816,723
Netherlands	823,318	220,370
Other European Countries ..	658,418	470,724
Central American States and		
British Honduras	189,422	103,080
Mexico	166,492	517,547
South America	54,527	50,260
Japan	671,205	2,635,819
British Australasia	123,409	—
Other Asia and Oceanica ..	518,258	338,086
British Africa	355,804	232,053
All other African Countries ..	—	1,043,527
Other Countries	13,138	4,038

THE TIN PLATE MARKET.

Messrs. Norton, Owen & Co., of 4, Bishopsgate Street Within, London, E.C., report under date January 30th, 1908, as follows:—

Since our last report of 16th inst. the market has been quiet, but a fair amount of business has been passing. There has been some cutting of prices by "bear" speculators and some of the smaller makers who have run short of orders, but the larger makers being tolerably well booked, are holding to their prices, which they allege barely cover present cost. We make oil sizes to-day:—

1c	18 $\frac{3}{4}$ × 14	124 sheets	110 lbs.	12/- per box.
1c	19 $\frac{1}{4}$ × 14	120 "	110 "	12/- "
1c	20 × 10	225 "	156 "	17/- "

F.o.b. Wales. Tin lining and iron hooping extra.

LATEST QUOTATIONS OF PETROLEUM SHARES.

ENGLISH COMPANIES.

This list is restricted to companies who have paid dividends or who are producers.

Company.	Capital Paid Up.	Value of Shares.	Latest Prices.
Assam Oil	£205,000	£1	$\frac{9}{16}$ - $\frac{11}{16}$
Baku Russian Petroleum ..	£750,000 Ord.	£1	$\frac{1}{9}$ - $\frac{2}{9}$
.. ..	£650,000 $\frac{5}{8}$ % Pref.	£1	$\frac{3}{6}$ - $\frac{4}{6}$
Bibi-Eybat Petroleum Co. ..	£250,000 Ord.	£1	$\frac{7}{10}$ - $\frac{8}{10}$
Californian Oilfields ..	£550,000 Ord.	£1	$\frac{5}{16}$ - $\frac{6}{16}$
Commonwealth Oil Co. Pref.	18/- paid up (Prem.)	£1	$\frac{1}{8}$ - $\frac{1}{4}$ pm
.. ..	Def. £1 fully paid	£1	$\frac{1}{8}$ - $\frac{1}{8}$
European Petroleum ..	£550,000 Pref.	£1	$\frac{1}{10}$ - $\frac{2}{10}$
.. ..	£550,000 Ord.	£1	$\frac{0}{6}$ - $\frac{1}{6}$
.. ..	£376,000 Deb.	£100	70-74
Russian Pet. & Liquid Fuel ..	£500,000 $\frac{6}{8}$ % Pref.	£1	$\frac{3}{3}$ - $\frac{4}{3}$
.. ..	£600,000 Ord.	£1	$\frac{3}{10}$ - $\frac{4}{10}$
Schibaieff Petroleum ..	£575,000 6% Pref.	£5	$\frac{1}{16}$ - $\frac{1}{16}$
.. ..	£575,000 Ord.	£1	$\frac{2}{6}$ - $\frac{3}{6}$
Shell Transport & Trading ..	£2,000,000	£1 xd	$\frac{45}{10}$ - $\frac{46}{10}$
.. ..	£1,000,000 Pref.	£10	$\frac{10}{8}$ - $\frac{10}{8}$
Spies Petroleum Company ..	£312,500	10s.	$\frac{6}{9}$ - $\frac{7}{3}$

RUSSIAN COMPANIES.

Company	Nom. Value in Roubles.	Quotations on Jan. 27th.	
		Lowest Roubles.	Highest Roubles.
Baku Naphtha Co.	100	576	579
Balakhany Naphtha Co. ..	250	—	—
Caspian Society	1,000	4,325	4,375
Mazout Co.	250	400	—
Melikoff, A. C.	250	—	—
Mirzoeff Bros.	250	—	—
Naftalan Co.	250	325	—
Naphtha Co. "Kavkas" ..	250	—	—
Naphtha Trading Co., A. I. Manta-	250	154	155
cheff & Co.	250	190	—
Neft Co.	250	—	—
Nobel Bros.	5,000	10,175	11,250
.. ..	250	535	540
Rops and Co. V... ..	250	300	—
Russian Naphtha Co. ..	250	100	—
Society Mazout	250	—	—
Ter-Akopoff Co.	250	—	—
Tumaieff & Co., J. G. ..	250	—	—
Volga-Caspian Naphtha and Trading Co	250	—	—
.. .. (Second Issue)	250	—	—

SCOTCH COMPANIES

Supplied by Messrs. MACLEAN AND HENDERSON, STIRLING.

Company.	Capital Paid Up.	Value of Share.	Latest Prices.
Broxburn Oil Co., Ltd., Ord. 17/- pd	£235,000	£1	£1 19s. 6d.
Do. 6% Cum. Pref. ..	£100,000	£10	£12 2s. 6d.
Burmah Oil, Ord.	£1,100,000	£1	£3 15s. od.
Do. Pref.	£250,000	£1	£1 5s. od.
Dalmeny Oil Co., Ord. (7 paid) ..	£37,800	£8 10s	£5 10s. od.
Do. 5% Pref.	£18,900	£7	£4 13s. od.
Oakbank Oil Co., Ltd., Ord.	£170,000	£1	£1 14s. od.
(17s. paid)			
Pumpherstons Min. Oil Co., Ltd., Ord.	£110,500	17s.	£12 16s. 3d.
(17s. paid)			
Do. 6% Cum. Pref.	£100,000	£10	£13 5s. od.
Tarbrax Oil Co., Ltd. Ord. (£1 pd.)	£38,350	£1	£2 15s. 6d.
Do. 6% Cum. Pref.	£35,000	£1	£1 3s. od.
Young's Paraffin Co., Ltd., Ord. ..	£452,808	£4	£3 10s. 6d.
Do. "B" Deb...	£150,000	£100	£155 10s.

DUTCH COMPANIES.

Company.	Latest Quotations (per cent.)	Florins.
Arnhemsche Petroleum Mij.	45	1,000
Aurora (Deb. 5%)	80	—
Campina Poiana Mij.	—	—
Dordtsche Petroleum Mij. (Pref.) ..	130	50
.. .. (Deb. $\frac{4}{16}$ %)	101 $\frac{1}{4}$	1,000
Gaboës	2 $\frac{1}{2}$	—
Holl. Rumeensche Petroleum Mij. ..	16	1,000
Int. Rum. Pet. Mij.	78	500
Java Petroleum Mij. (Ord.)	—	1,000
.. .. (Pref.)	18	—
Koninklyke Nederl. Pet. Mij. Shares ..	281 $\frac{1}{2}$	250-1,000
.. .. Share certificates	282	1,000
Mœara Enim Petroleum Mij.	142 $\frac{1}{2}$	100
.. .. 1-1,000 Oblig. 5	—	250-1,000
"Moesi Ilir" Petroleum Mij.	—	—
Nederl.-Rumeensche Petroleum Mij. ..	31 $\frac{9}{16}$	—
Nieuwe Ned. Petroleum Mij. And. ..	—	1,000
Oliebronnen in Hannover Mij.	42	—
.. .. (Deb. 5%)	88 $\frac{1}{2}$	—
Panolan Maatschappij Cert.	282 $\frac{1}{2}$	—
Perlak Petrol. Mij. (6% cum. pr. A.) ..	133 $\frac{3}{8}$	1,000
.. .. (Common)	—	—
Sumatra-Palembang Petroleum Mij ..	92 $\frac{7}{8}$	500
Tarakan Petrol Mij.	28	—
Zuid Perlak Petrol. Mij. (Pref.)	88 $\frac{1}{2}$	—

J. F. FARWIG & Co.,

Established 1809.

SPECIALITIES:—

Tins & Cans for Petroleum,
Motor Spirit, Turpentine and
Turpentine Substitutes. . . .

Patents—Nos. 6905 and 9671.

OIL and VARNISH CAN
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War & India Offices.

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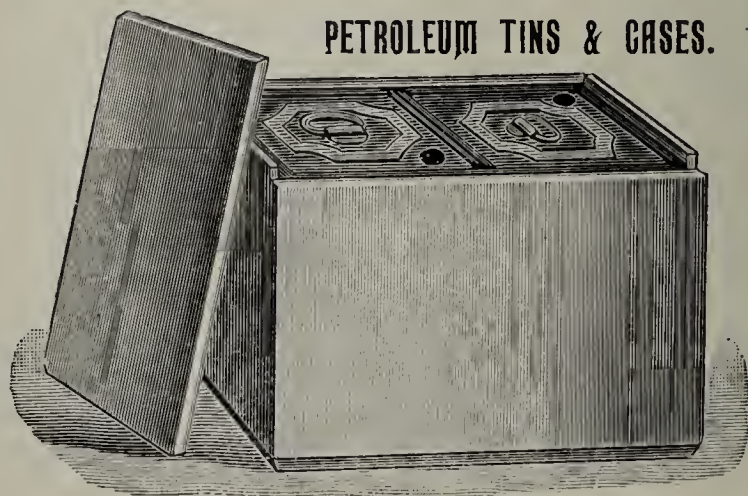
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Tins and Cases for the shipment of Petroleum and other liquids. These tins are made double seamed all over with solid corners.

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upon this railway they were in every way satisfactory, and the work of adapting locomotive boilers to the burning of oil fuel was commenced, the result being that the example set by the Western Railway of France was followed, and several of the fastest expresses were run with the new power. From that time, however, oil fuel on English railways has made little advance, and to-day the difficulties cluster round the question as they did years ago. One great trouble in this respect has in the past been due to the limited supply, or, to be more accurate, the distance of the productive areas from the British markets, while another is that of the price of the fuel itself.

We are afraid that occasionally the importance of the British liquid fuel market is under-estimated by the producers themselves, but, for our purpose, we will look at bare facts. During the past year somewhere about 12,000,000 tons of coal were used upon the railways of the United Kingdom—an amount which in itself suggests the vast scope which is offered to-day to liquid fuel, for supposing for a moment that coal was discarded for oil fuel, the quantity of the latter article which would be used would at all events reach over 6,000,000 tons. But ere this much-desired change can be brought about, there must necessarily be a long period of preparation and organisation on the part of the producers and distributors, for it is with them that the initial stages of the fight rests.

As we have said, the liquid fuel market in this country is a factor which cannot be ignored by those whose interests are wrapped up with the future of the oil industry, and we, on our part, regret that in this direction the palpable advantages which are offered by the adoption of liquid fuel do not seem to have received attention on the part of the oil producers and distributors such as has been warranted. But even here there are many difficulties. So far as Russia is concerned, where oil fuel is practically the only fuel obtainable, a ready market is found at home under ordinary circumstances, and thus she can do little at present in regard to supplying whatever demand there may be in this country, while, in addition, the avowed policy of the Government is unfavourable to the exportation of that for which there is such a demand at home.

In America, too, liquid fuel finds many consumers, yet the supply is more than equal to the demand, and thus we have to look principally to that country for our fuel of the future. Roumania also offers great facilities for supplying the demand, and as time goes on we are certain to see great progress by Roumania in this respect. The question of price is, of course, one of great moment to the railway companies, and it has been owing to the huge figure at which oil fuel has stood that has prevented progress. But several advances in the price of coal have caused the question to again possess an attraction for some of our railway companies, and we hear that very shortly one railway, at all events, is going to make a bold move for the use of liquid fuel.

But there is not a subject than that of economy

which should have great weight with the railway companies. The reduction of labour and increase of speed, which is occasioned by the use of oil fuel is an important factor which cannot be overlooked. The facility with which oil is handled and stored as compared with coal says much for its more general adoption as a fuel, especially on the railways where time is the greatest consideration, and when ease with which long distance runs can be maintained is so necessary.

LONDON OIL SHARE MARKET.

FRIDAY, JANUARY 31ST, 1908.

The improvement in the monetary situation consequent on the further reduction of the Bank Rate to 4 per cent. has had a very stimulating effect upon all classes of Gilt-edged Securities, and is gradually spreading to other departments, but we regret to say that, so far, the Oil Section has not in any way participated, for there is scarcely an alteration to record from prices published in our last issue.

For the convenience of our readers we give current quotations in full for Saturday, the 18th ult.:—Anglo-Russian Petroleum $\frac{1}{16}$ - $\frac{1}{8}$, Assam Oil, Ltd., $\frac{1}{2}$ - $\frac{5}{8}$, Baku Ordinary 1s. 9d. to 2s. 3d., Baku Preference $\frac{5}{8}$ - $\frac{7}{8}$, Bibi-Eybat $\frac{5}{16}$ - $\frac{7}{16}$, Californian Oilfields $5\frac{7}{8}$ - $6\frac{1}{8}$, Californian Five Per Cent. First Mortgage Debentures 93-96, Californian Refineries $\frac{1}{4}$ - $\frac{3}{4}$, European Petroleum $\frac{1}{16}$ - $\frac{3}{16}$, European Six Per Cent. First Mortgage Debentures 70-74, European Six Per Cent. Second Mortgage Debentures 34-37, Russian Ordinary, 3s. to 4s., Russian Russian Six and a-half Per Cent. Preference 4s. to 5s., Russian Five and a-half Per Cent. Debentures 76-79, Russian Six Per Cent. "B" Debentures 45-50, Schibaieff Ordinary 3s. 6d. to 4s. 6d., Schibaieff Preference $1\frac{1}{4}$ - $1\frac{1}{2}$, Spies Petroleum $\frac{5}{16}$ - $\frac{3}{8}$, Shell Transport Ordinary 44s. 6d. to 45s. 6d., Shell Transport Preference 10-10 $\frac{1}{4}$. And the list still holds good, with the exception of an improvement of $\frac{1}{8}$ in Californian Oilfields at $6\frac{1}{4}$, an advance of two per cent. in the Debentures to 95-98, and a gain of $\frac{1}{8}$ in Shell Transport Preference at $10\frac{1}{8}$ - $10\frac{3}{8}$.

At the fortnightly carry-over, which commenced on January 28th, rates of interest ruled rather easier than for some time past, and the alterations in making-up prices fixed at the previous settlement are as follows:—

Advances—Californian Oilfields $\frac{1}{16}$ at $6\frac{1}{16}$, Spies $1\frac{1}{2}$ d. at 7s.

Declines—Baku Ordinary, 3d. at 2s. and the Preference a similar sum at 3s. 9d.; Russian Petroleum Ordinary and Preference were also 3d. lower at 3s. and 4s. respectively, while Shell Transports lost $\frac{1}{16}$ at $2\frac{1}{4}$.

No change was recorded in either Anglo-Russian at 1s., or Schibaieff Ordinary and Preference at $\frac{1}{8}$ and $1\frac{1}{4}$.

Latest quotations are to be found on page 72.

AN IMPROVED METHOD OF VAPOURISING OIL FOR INTERNAL COMBUSTION ENGINES.

A patent has recently been granted to Messrs. Brown and Barlow, Ltd., of 5, Great Winchester Street, London, engineers, Mr. Clement Brown, of the same address, engineer, Dr. Paul Dvorkovitz, of 45, St. Mary Axe, London, and Mr. Folke Olai, engineer, of 16, Loveday Street, Birmingham, for an invention relative to an improved method of vapourising oil for the making of a combustible mixture for internal combustion engines.

According to the present invention, which is more particularly applicable for oils that have a boiling point higher than 200° F., the complete specification points out that the oil is first passed through a suitable vessel or container, where it is heated in any suitable manner to a temperature approaching that at which it boils; for instance, in the case of ordinary kerosene, the temperature to which the oil is heated in the said vessel may be about 400° F. The heated oil is conducted from the vessel to an orifice, and as it issues therefrom it is vapourised by applying additional heat—that is to say, heat other than such as may exist in the air, or within the combustion space into which the oil is injected.

It is essential that the oil should arrive at the orifice at the correct temperature, so that the device for heating the coil must be under control.

For instance, the heated oil may issue from the nozzle of a carburetter, and hot exhaust gases or heated air may be directed into or on to it at or near the point of the nozzle, or it may be heated by any other suitable means. The vapour is then mixed with the quantity of air necessary for its combustion and the mixture is supplied to the engine in any known manner.

To enable the method to be well understood there is described in the specification a form of apparatus for putting it into effect, although the present invention is not concerned with the apparatus for applying the method, such apparatus being capable of numerous variations.

Fig. 1 is a diagrammatic vertical section through the fuel admission apparatus and exhaust pipe of an internal combustion engine.

Fig. 2 is a side elevation, and Fig. 3 is a section on line 3—3 of Fig. 1, drawn to an enlarged scale. Fig. 4 is a view corresponding to Fig. 3 shewing a modified construction of this part of the apparatus.

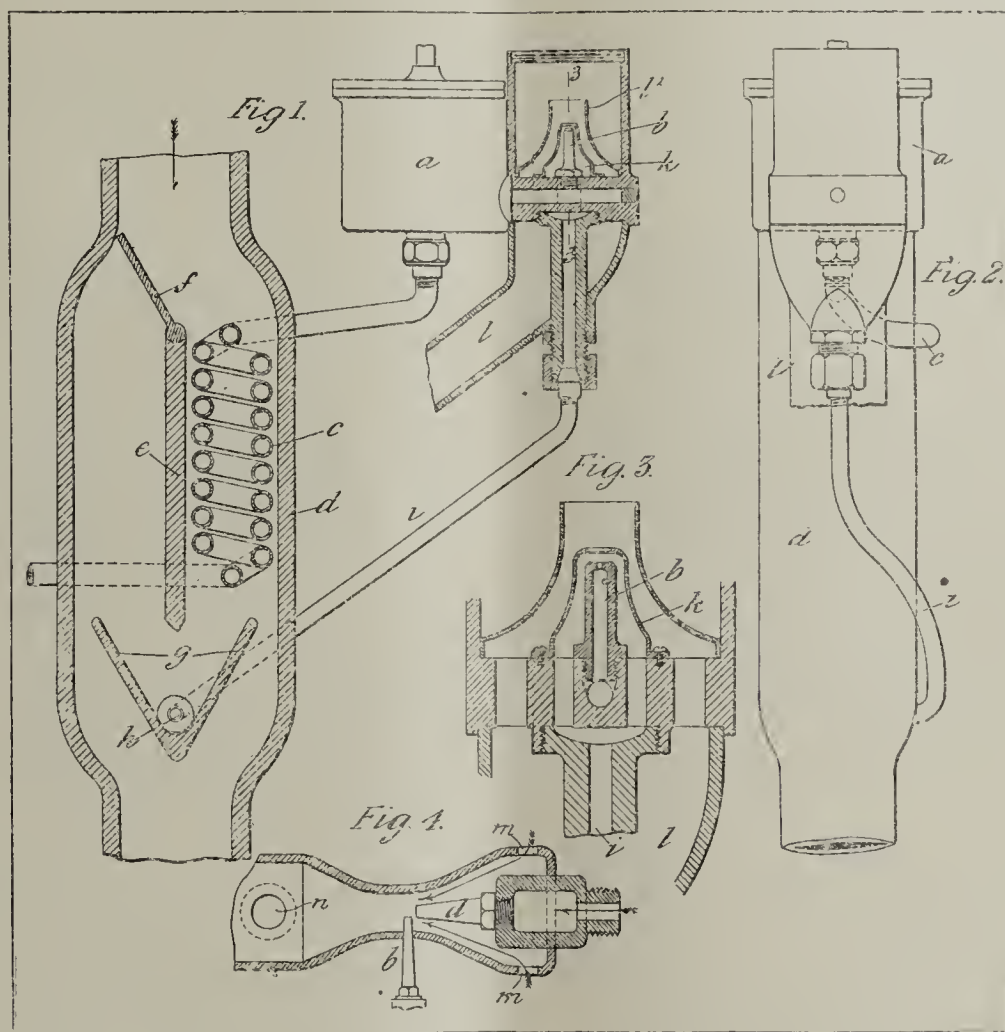
a is the well-known float chamber that determines constant level of the oil in the jet *b*. The oil, such as kerosene, passes to this float chamber from a reservoir through a coiled pipe *c* contained in the exhaust pipe *d* through which the exhaust passes in the direction of the arrow. Within the exhaust pipe is a partition *e* dividing a portion of the pipe into two channels in one of which the coil *c* is situated; by adjusting a flap valve *f* the proportion of the exhaust which will pass over the coil—and therefore the temperature of the latter—can be controlled. Beneath the partition *e* are inclined adjustable baffle plates *g*, which direct the hot gases to the orifice *h*, wherefrom springs the thermally insulated pipe *i*.

The intake of fuel by the engine through jet *b* occurs on the suction stroke in the known manner, and the method according to the invention is applied by causing the pipe *i* to open into a substantially conical hood *k* surrounding the jet *b*. At the moment when the hood is leaving the jet in response to the suction of the

engine a quantity of hot exhaust gases is drawn by the same suction through the hood *k* and impinging on the oil leaving the jet, and already heated to near its boiling point by passage through the coil *c* vapourises the oil. The air for combustion, which may either be cold or heated to any desired temperature, is drawn in through pipe *l* and cone *l'* in known manner.

In the modified construction of aspirator or ejector shewn in Fig. 4 the exhaust gases are directed by the pipe *d* across the orifice of the oil jet *b*, an arrangement which is in some respects preferable to that of Fig. 3, inasmuch as it breaks up and vapourises the film of oil which tends to cling to the jet orifice and thus interfere with the aspiration of the oil. *m* and *n* are air inlets.

It will be obvious that the invention, although described with reference to internal combustion engines, is equally applicable to the vapourisation of oil for gas turbines.



THE RUSSIAN LOAN TO PETROLEUM PRODUCERS.

INTERESTING DETAILS JUST MADE PUBLIC.

An Echo of the 1905 Disorders.

Only quite recently has the granting of loans to the petroleum producers who suffered by the riots in August, 1905, out of a sum set aside for the purpose by the Russian Government, been completed. For this purpose a sum of 20,000,000 roubles was set aside by a special decision of the Committee of Ministers, sanctioned by the Emperor on 11th November, 1905. This sum was determined upon according to estimates made by the petroleum producers. In reality the loans granted in the aggregate amounted to 12,423,340 roubles. The great difference between the estimate and the sum actually disbursed is explained by the fact that of a total number of 160 firms who suffered by the riots and applied for relief loans only 94 received such loans. Three of these firms had added to their loans the amounts originally intended for three others who had in the meantime amalgamated with them; 14 firms of their own account refused to take the loans; to 49 firms loans were refused, whilst in very many cases the loans granted were very much less than the losses sustained. The reason for refusing or curtailing loans were either the insignificant extent of the losses or the want of security for the return of the capital owing to the insufficiency of the property or instability of the firm, inactivity during the two years which preceded the riots, and, finally, the possession by the firm of sufficient means of their own to restore their plant and installations.

According to the nature of their business the loans were distributed among the different classes of firms as under :—

	Roubles.
Petroleum producers	10,234,940
Boring contractors	1,280,400
Pipe line owners	8,000
Petroleum Producers' Association	900,000
Total	12,423,340

In granting the loans special attention was paid to get security for the money and as early repayments as possible. As security, if the producer was the owner of the property, a mortgage was taken on the land, and if this proved of insufficient value a bill of sale was also taken on movable property. As to time for repayment, this was fixed in accordance with the productivity of the property in the year which preceded the riots and the profitability of the business.

Under these conditions it was found possible to stipulate in the case of some firms on earlier repayments than the maximum term of ten years fixed for these loans. The interest charged on these loans was $5\frac{1}{2}$ per cent. per annum, which at the time of the publication of the decree about these loans was the average rate of interest on Russian Government loans. Such a low rate of interest was charged only in view of the great importance of the petroleum industry to the whole industrial life of Russia, and as it was further greatly in the interests of the Treasury to ensure the restoration

of the oil fields at the earliest moment possible. The first loans were granted in November, 1905, and the bulk of the loans were all given out by July, 1906. The beneficial effects of the loans are shewn by the fact that whilst in the latter months of 1905, after the riots, the production of crude oil was quite insignificant, on the average not more than 15,000,000 poods per month, in January, 1906, when a number of firms had been enabled, with the aid of the loans received, to restore their plant and resume exploitation, the production rose to 34,000,000 poods, and by May had reached 42,000,000 poods.

THE ANGLICIA PETROLEUM COMPANY, LIMITED.

The report of the above company for the year ended April 30th last states that, after charging all general expenses and making ample allowance for depreciation, the Galicia Co. has declared a dividend of 4 per cent. on its capital, equal to 240,000 kroner, which at 24 kroner per £ amounts to £10,000. To this are added the amount brought forward from last year £5,056, and transfer fees £7, making a total of £15,073. The directors now propose to write off a further one-fifth of the preliminary expenses, £1,980, to pay a dividend of 7 per cent. for the year on the first preference shares, £7,559, and to carry forward the balance of £5,534. The directors report that the business of the company continues to expand and develop in a satisfactory manner, and the accounts of the Galicia Co. shew that the gross profit during the year increased by over £10,000. Unfortunately, however, the very disappointing results obtained at Boryslaw have rendered it necessary in the best interest of the company not only to write off the whole drilling expenses of the year, but also to increase materially the amount of the depreciation, and a sum of £30,900 has been applied to these purposes. Production at Schodnica shews only a small falling off as compared with the previous year, a result due to the careful cleaning and deepening of some of the shafts. The prospects of the Tustanowice oil field are satisfactory; one of the shafts has already given a good production for several months, and some of the others are showing favourable indications. The results of the work at the refinery are satisfactory. The products manufactured continue to command a good sale. The refined oil cartel terminated last April, and the negotiations for renewal were unsuccessful, causing a severe fall in the price of kerosene. The board, in anticipation of this result, and with a view to meeting altered conditions, sanctioned the expenditure necessary to enlarge certain departments of the refinery. This enabled a largely increased trade to be done, which, so far as can at present be judged, has counteracted the effect of the reduced selling price of kerosene.

We understand that the annual meeting of the company was held in London one day this week, but receiving no notification of the same, nor an invitation to be present, we are not in a position to publish a report of the proceedings.

NOTES FROM ALL QUARTERS.

RUSSIA.

The Alkhan-Yurt Petroleum Co., operating in Grosny, has, in 1906, its second financial year, incurred a loss of 9,648 roubles on a turnover of 811,064 roubles.

Astrakhan Stocks.—According to statistics, the stocks of various petroleum products which were left to winter in Astrakhan are:—Residuals and crude oil, 6,105,000 poods; kerosene, 1,150,000 poods; and other products 100,000 poods; total, 7,355,000 poods.

Satisfactory Results.—The Neft Co., operating at Baku, has in 1906 made a profit of 430,954 roubles on a turnover of 1,877,812 roubles. A dividend of 8 per cent. has been declared. The company has debtors for 686,314 roubles and creditors for 4,232,997 roubles.

Reduction of Capital.—The Sunik Petroleum Co. proposes to reduce its capital from 2,100,000 roubles to 840,000 roubles, by reducing the nominal value of the shares from 250 to 100 roubles each. In accordance with this the value of the company's assets will likewise be written off.

The Nijni-Novgorod Petroleum Co., in its seventh financial year, 1906, had a profit of 80,721 roubles on a turnover of 265,376 roubles. From previous years there is left a balance of loss of 62,307 roubles. There are debtors for 27,194 roubles, and creditors for 259,003 roubles.

Astrakhan Freights.—It is reported that the combine of Caspian shipowners have fixed the freight for oil from Baku to the 12-feet roadstead at Astrakhan at 3 copecs per pood, fuel and leakage to be borne by shipper. This represents 4-4½ per cent. of the quantity of the oil carried.

New Company for Ferghana.—A company was formed recently in Russia under the title of Santo Central Asian Petroleum Co. for the purpose of exploiting a tract of petroliferous land in the Ferghana province, of an area of 155 acres, and also to prospect for oil in other parts of Turkestan. The founder is Mr. N. Tzukanoff, and the capital is 500,000 roubles.

A Sound Concern.—The Baku Naphtha Co. during 1906, its thirty-second financial year, earned a profit of 1,960,985 roubles on a turnover of 4,497,954 roubles. A dividend of 37½ per cent. has been declared. There are debtors for 665,881 roubles and creditors for 979,332 roubles. The share capital is 4,039,000 roubles and the reserve fund stands at 2,019,500 roubles. This is one of the Rothschild concerns in Russia.

A Disastrous Liquidation.—Messrs. G. M. Araffeloff and Co. wound up their affairs in April, 1907, and have just published an official statement of affairs. The company has altogether lost 964,000 roubles. The property was sold to the Anaib Co. for 170,300 roubles; other assets realised 34,579 roubles. The total proceeds thus amounted to 204,879 roubles. The company paid off debts for 28,068 roubles. Creditors for 280,000 roubles were compounded with at 40 per cent. The shareholders received 9 roubles for every 500 roubles share—i.e., 1.8 per cent.

AMERICA.

Encouraging.—Strong indications of oil are reported to have been encountered in a well being drilled at Weesatche, in Goliad county, Texas.

Illinois Production.—The production in the Illinois fields during 1907 is stated to have been 24,000,000 barrels. During the year no less than 5,000 wells were drilled.

Operators Combine.—The American Federation of Labour has recently established a union of the oil operators at Saratoga, Texas, similar to the organisations now in existence in other fields.

Probable Extension of the Kentucky Field.—The *Oil, Paint and Drug Reporter* states that indications are believed to be favourable for the extension of the Kentucky field. Activity in drilling is now confined to six counties, but in about fifty counties in the State oil has been shewn in commercial quantities.

American Exports during 1907.—The total exports of petroleum and its allied products from America during the past year amounted to 1,183,291,688 gallons and were valued at \$85,480,634, as compared with a total export of 1,181,514,101 gallons in 1906, valued at \$81,013,004. In our next issue we shall publish the detailed exports during December.

A Protest by Texas Producers.—At a meeting of Texas oil producers a few days ago at Beaumont it was decided that a stand should be made against entering into contracts with the pipe line companies at the prevailing low level of prices. The members, it is reported, were strongly in favour of adopting a system whereby they could reach the consumers direct.

The Drake Memorial.—It is now almost a certainty that the site of the first well drilled by Colonel Drake near Titusville in 1858 will be properly marked with a memorial for the benefit of posterity. Many subscriptions have already come in from oil men the world over, and it is now suggested that the design will include a granite shaft nearly 80 feet high, situated in the centre of a plateau one hundred feet square.

Increase in Pipe Lines.—It is announced that the Standard Oil Co. has outlined a plan for increasing its network of pipe lines in Western Pennsylvania and West Virginia, with the object of covering more thoroughly all oil-producing points on these sections. One of the works to be undertaken with a view to increasing the flow of oil to the refineries at tidewater, is to be the building of an eight-inch line from Washington, Pa., to Morgantown by way of Waynesburg.

ROUMANIA.

The Tosca Co. has struck oil in a borehole at Bustenari. The yield is about 20 tons daily.

Steaua Romana Explorations.—A prospecting well of the Steaua Romana Co., at Aricesti, has had a violent eruption of gas, which set fire to the derrick.

Roumanian Market.—The price of crude oil in Roumania remains stationary—42 to 42½ francs per ton. The restricted output of the last few weeks has stiffened the market. The market in illuminating oil and other products remains unchanged.

French Capital in Roumania.—The shares of the Colombia Co., a French concern operating in Roumania, have been introduced on the Paris Bourse. It is expected that this fact will help to attract further French capital to the Roumanian oil fields.

Promising New Field.—The prospecting well of the Gallo-Romana Co. at Filipesti-de-Targ, on the Moreni-Baicoi line, has had a violent eruption of sand and water at a depth of 180 metres, lasting 38 hours. At 90 metres this well passed through a small oil stratum.

Road Cars for Bucarest.—The Romano-American Co. has introduced on the streets of Bucarest road tank cars for the retail sale of oil, which cars are the object of great curiosity, being the first ever seen in Bucarest. Similar road cars have also been introduced by the company at Galatz.

Roumanian December Output.—The following are the figures of the production of the leading Roumanian firms in December:—Steaua Romana, 26,516 tons; Bustenari Co., 9,470 tons; Romano-American Co., 7,192 tons; Telega Oil Co., 3,818 tons; International Co., 3,335 tons; Trajan Co., 2,810 tons.

The Roumanian Petroleum Association.—A meeting of the council of the Roumanian Petroleum Association was held on January 18th to arrange matters to be discussed at the general meeting of the association to be held on February 22nd. The main subject of discussion is expected to be the management of the financial affairs of the association.

Another Campina Spouter.—The borehole of the Regatul Roman Co. at Pitsgaia, near Campina, which became corked after the first eruptions, has now been cleared out. It now yields about 3,000 tons of oil per twenty-four hours. The Regatul Roman Co. has had to obtain the use of the Trajan Co.'s reservoirs to collect and store the oil. This oil, which is of superior quality, being rich in benzine and paraffin, is sold to the Steaua Romana.

LAUNCH OF A NEW OIL TANKER— THE "HERMIONE."

On Friday, January 17th, there was launched from the Wallsend shipyard of Messrs. Swan, Hunter, and Wigham Richardson, Ltd., a steel three-deck tank steamer, which has been built to the order of Messrs. C. T. Bowring and Co., Ltd., of Liverpool and London. The leading dimensions of the vessel are 397 feet overall length, by 50 feet 6 inches extreme breadth, by 31 feet 10 inches depth moulded. She will carry 6,900 tons of oil in bulk in a number of separate oil-tight compartments, as well as 600 tons of bunkers. The engines are being built by the North-Eastern Marine Engineering Co., Ltd., Wallsend, and consist of a set of triple expansion engines, having cylinders 26 inches, 43 inches and 72 inches by 48 inches, steam being supplied by three large boilers, working at a pressure of 180 lbs. per square inch. The vessel will take the highest class at Lloyd's. She is the seventh vessel built by the firm for Messrs. C. T. Bowring and Co., Ltd., and an eighth will be launched by them in a few months' time.

As the new tanker left the ways, she was named "Hermione," by Miss Elsie Bowring, sister of Mr. Clive Bowring, one of the London directors, who was present, together with Mr. Henry A. Bowring, one of the Liverpool directors. The vessel is being constructed under the supervision of Messrs. Jacobs and Barringer, London, whose resident inspector is Mr. Walter Bradney, and of Capt. Towill and Capt. Cox, marine superintendents to the owners.

ROUMANIAN PRODUCTION DURING 1907.

APPROXIMATE ESTIMATE.

We have now the figures of the production of crude oil at the Roumanian oil fields during November, which added to the production of the first ten months of 1907 (published regularly in the REVIEW), the output for the eleven months of 1907 works out at 1,040,000 tons. Estimating the production in December at 90,000 tons, we get a total production for 1907 of 1,130,000 tons.

The production in 1907 month by month was as under:—

	Tons.		Tons.
January ..	81,949	August ..	97,425
February ..	89,093	September ..	98,551
March ..	98,335	October ..	97,973
April ..	95,198	November ..	88,419
May ..	99,997	December (estim'd)	90,000
June ..	92,711		
July ..	101,778	Total ..	1,133,429

The progress made by the Roumanian petroleum producing industry during the last ten years is shewn in the following figures of output:—

	Quantity. (in tons.)	Increase against preceding year. Per Cent.
1898 ..	180,000	—
1899 ..	250,000	39
1900 ..	250,000	—
1901 ..	270,000	7½
1902 ..	310,000	14½
1903 ..	384,302	24
1904 ..	500,561	31
1905 ..	614,870	23
1906 ..	887,091	44½
1907 (about) ..	1,130,000	27½

AMERICAN PETROLEUM EXPORTS.

STATISTICS FOR NOVEMBER.

According to the official publication of the Washington Bureau of Statistics, the exports of petroleum from America from the various ports during November were as under:—

	1906. Quantities. Gallons.	1907. Quantities. Gallons.
CRUDE—		
Baltimore ..	—	—
Boston and Charlestown ..	—	—
Delaware ..	—	—
New York ..	6,033	—
Philadelphia ..	9,627,299	6,608,207
Galveston and Sabine ..	1,040	—
Total ..	9,634,372	6,608,207
Total value for the month, 1906 ..	..	\$548,217
" " " 1907 ..	..	\$405,250
NAPHTHAS—		
Baltimore ..	—	495
Boston and Charlestown ..	2,100	—
Delaware ..	—	—
New York ..	406,451	2,687,453
Philadelphia ..	93,850	259,348
Galveston ..	—	—
Total ..	502,401	2,917,296
Total value for the month, 1906 ..	..	\$70,293
" " " 1907 ..	..	\$287,479
ILLUMINATING—		
Baltimore ..	—	1,583,588
Boston and Charlestown ..	70,799	61,761
Delaware ..	—	—
New York ..	48,378,525	45,057,255
Philadelphia ..	22,986,061	26,722,041
Galveston ..	2,403,261	3,811,015
Total ..	73,838,646	77,235,660
Total value for the month, 1906 ..	..	\$4,441,003
" " " 1907 ..	..	\$5,086,725
LUBRICATING—		
Baltimore ..	586,092	337,250
Boston and Charlestown ..	22,353	25,120
Delaware ..	—	—
New York ..	8,431,299	8,736,109
Philadelphia ..	3,552,729	5,138,295
Galveston ..	9,000	3,150
Total ..	12,601,473	14,239,924
Total value for the month, 1906 ..	..	\$1,498,401
" " " 1907 ..	..	\$1,708,864
RESIDUUM—		
Baltimore ..	—	—
Boston and Charlestown ..	—	222,000
Delaware ..	—	—
New York ..	530,000	1,725,000
Philadelphia ..	5,333,023	3,471,428
Galveston ..	—	3,336,001
Total ..	5,863,023	8,754,429
Total value for the month, 1906 ..	..	\$181,420
" " " 1907 ..	..	\$306,013
TOTAL MINERAL OILS—		
Baltimore ..	586,092	1,921,333
Boston and Charlestown ..	95,252	308,881
Delaware ..	—	—
New York ..	57,752,308	58,205,817
Philadelphia ..	41,592,962	42,199,319
Galveston ..	2,413,301	7,150,166
Total ..	102,439,915	109,785,516
Total value for the month, 1906 ..	..	\$6,739,334
" " " 1907 ..	..	\$7,794,331

YOKOHAMA PETROLEUM IMPORTS DURING NOVEMBER.

The imports of petroleum products into Yokohama during November amounted to 1,217,260 gallons, and were valued at 333,651 yen. The imports during November, 1906, were 1,124,873 gallons, valued at 232,193 yen. The total petroleum imports for the eleven months of the year amounted to 16,679,218 gallons, and are valued at 3,670,116 yen.

THE MINERAL RESOURCES OF OKLAHOMA.

By DR. CHAS. N. GOULD, Professor of Geology, Oklahoma State University.

(Concluded from page 40.)

At the present time no one dares to predict what the future of the oil industry of Oklahoma may be, but it is at least safe to say that so far not one-fourth of the territory which will develop into prolific fields has yet been prospected, and not one-twentieth been developed.

There are, however, certain parts of Oklahoma in which there is little reason to believe that oil and gas will ever be found in paying quantities. During the past ten years a large number of wells, perhaps nearly 100 in all, have been drilled in the rocks of red beds which occupy the western half of the State, but nothing of value has ever been found in this region. Other regions in which the chances for oil and gas in paying quantities are not good are the Ouachita, Arbuckle and Wichita mountains, in the southern part of the State, and the Flint Hills country east of Grand river, in North-eastern Oklahoma. Roughly speakly, the chances for finding oil or gas are not good west of the ninety-seventh meridian nor south of the northern limit of the Arbuckle and Ouachita mountains. As exceptions to these general statements the regions immediately surrounding the Arbuckle and Wichita mountains should be mentioned, for it may be possible to find considerable quantities of oil and gas just outside these mountains. A considerable field has already been developed at Wheeler, south of the Arbuckle mountains, and oil or gas have been found at Gotebo, Lawton and Granite, near the Wichita mountains. The locations of these various areas are first, the developed regions; second, the probable limit of the productive field; third, the regions which may possibly contain oil and gas; and, fourth, the regions where there is little hope for finding these products.

One matter which should not escape attention is the immense waste of valuable fuel now going on. Less than a year ago I saw in the Glenn pool three streams of oil, each as large as a man's body, flowing down the hill-side and going to waste. The wells were flowing, the tanks were full, and there was no way to save this oil. Since that time means have been provided for preserving the oil. The same day I passed dozens of wells from which immense quantities of gas was escaping, in some cases several million cubic feet per day. It is no uncommon thing in any part of the oil region to see gas escaping from pipes burning all day long, for it is cheaper

to let it burn than to take the trouble to turn it off. Such negligence is not short of criminal, for it must be remembered that the amount of these hydrocarbons is strictly limited, and when once exhausted they can never be replaced. The Government authorities, who have heretofore had the matter in charge in the oil regions, have done much to prevent waste, but much remains for the government of the new State to accomplish. If this fuel is properly conserved, it will last for hundreds of years, but if permittd to go to waste it will be dissipated in a single generation.

In certain localities in Oklahoma gas is being sold at five cents per thousand feet for factory purposes and 15 cents per thousand feet for domestic purposes. At Fort Smith (Ark.), where coal can be purchased for \$3 a ton, the people prefer to pay 50 cents per thousand feet for gas for domestic use, because of the greater cleanliness and comfort in using gas. Gas is now being piped from the Kansas fields to Topeka and Kansas City on the north, and to Winfield and Wichita on the west. Muskogee, the second largest town in Oklahoma, gets gas from Ramona, 60 miles distant. Since the pipe line was installed gas in large quantities has been found with ten mifes of Muskogee. A pipe line has just been completed which carries gas from Tulsa and the Glenn pool region to Oklahoma City, and this line will soon be extended to supply a number of other towns in Western Oklahoma.

If care is taken to prevent waste there need be no fear that the supply will soon be exhausted. In my investigations of the Ramona-Tulsa-Glenn pool region I have been surprised to note how small a part of the gas-producing area has been drilled over. It is safe to say that the present consumption could easily be increased twenty-fold without seriously affecting the supply.

Oklahoma has a vast amount of coal, but if the State did not have a ton of coal the oil and gas, if properly utilised, would furnish sufficient fuel to last for many generations. At the present time no one knows the extent of the field or the amount of oil that may be produced, but, judging from the present developments and the stratigraphy and structure of the rocks in regions yet undeveloped, one is safe in making the prediction that the Oklahoma oil field is destined to become the largest and most prolific field so far discovered on the Continent.

CLASSIFIED IMPORTS INTO UNITED KINGDOM UP TO JANUARY 27th, 1908.

IN GALLONS.

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COUNTRY.	ILLUMINATING.		LUBRICATING.		RESIDUALS.		GAS OIL. (Solar)		BENZINE.		FUEL OIL.		OTHER DESCRIPTIONS.		TOTALS.	
	Since Jan. 13.	From Jan. 1.	Since Jan. 13.	From Jan. 1.	Since Jan. 13.	From Jan. 1.	Since Jan. 13.	From Jan. 1.	Since Jan. 13.	From Jan. 1.	Since Jan. 13.	From Jan. 1.	Since Jan. 13.	From Jan. 1.	Since Jan. 13.	From Jan. 1.
Austria ...	—	—	8,000	8,000	4,200	4,200	—	—	—	—	—	—	—	—	12,200	12,200
Belgium ...	—	—	31,610	70,760	—	—	—	—	—	—	—	—	—	—	31,610	70,760
Canada ...	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Dutch India ...	—	—	—	—	—	—	—	—	766,080	766,080	—	—	—	—	766,080	766,080
Germany ...	256,660	273,400	59,410	173,270	820	1,440	—	—	—	—	—	—	—	—	316,890	448,110
Holland ...	—	—	1,700	4,790	—	—	—	—	—	—	—	—	6,820	9,220	8,520	14,010
Roumania ...	—	756,000	—	—	—	—	—	2,022,350	—	966,080	—	—	—	—	—	3,744,430
Russia ...	1,461,000	2,082,000	2,200	4,850	—	—	—	—	—	—	—	—	—	—	1,463,200	2,086,850
U.S.A. ...	3,129,360	7,777,740	2,544,020	3,683,960	—	—	2,342,060	4,532,930	370,370	370,370	—	—	364,850	373,850	8,750,660	16,743,850
Other Countries	—	—	21,380	23,190	—	—	—	—	—	—	—	440	—	—	21,380	23,630
	4,847,020	10,889,140	2,668,320	3,958,820	5,020	5,640	2,342,060	6,555,280	1,136,450	2,102,550	—	440	371,670	388,070	11,372,540	23,929,920

THE SPIES PETROLEUM COMPANY, LTD.

In a circular recently issued by the Secretary of the Spies Petroleum Co., Ltd., it is stated that the gross production of crude oil during the six months, 14th January to 13th July (n.s.), amounted to 3,279,380 poods, or an average daily output of 18,633 poods, as against 18,227 poods for the same period in the previous year.

The production since the 13th July (n.s.) shews an improvement over that of the first half of the year, the total for the full period of six months ending the 13th January (n.s.) being 3,727,780 poods, or an average daily output of 20,260 poods, as against 19,159 poods for the corresponding period of the previous year, and 18,633 poods for the first half of the year under review.

The output of the full year 1907 has thus been 7,007,160 poods, as against 6,245,470 poods for the previous year. The crude oil sold and delivered during the six months under review amounted to 2,380,435 poods, realising 499,640.67 roubles, an average selling price of 20.989 copecs per pood, as against an average price of 21.32 copecs for the same period in the previous year, but since the 13th July (n.s.) the average price has been somewhat higher.

Whilst fewer actual stoppages of work due to strikes occurred than in the corresponding period of the previous year, unrest on the part of the workmen only resulting in a complete cessation of work for a total of five days as compared with 16 days in the first half of the previous year, the situation at Grosny was at times very critical, and was the cause of great anxiety to the manager and staff at Grosny.

In June last the directors made various re-arrangements in the management of the company's business in Russia. Mr. Maresch has ceased to be manager at Grosny, and has become responsible agent and representative in Russia. Under the new arrangements it will no longer be necessary to maintain a separate agency at Moscow.

Mr. E. Hirsch, who has been with the company from the start, and whose services have been of great value to it, has resigned the position of London manager, in order to take up another appointment. Under the changed conditions of the business the directors do not consider it necessary to fill up the appointment at present.

PETROLEUM IN QUEENSLAND.

According to the *Queenslander* reports from Boonah tend to shew that the rumours of the discovery of petroleum in that district of Queensland have some foundation in fact. For some time a private syndicate has had representatives testing the favourable indications, and as a result it is stated that crude petroleum—a heavy black oil—has been found in a well less than 100 feet in depth, and within two miles of the town. On a farm five miles from Boonah a bore is said to shew a volatile oil, at 130 feet. The water there is impregnated with oil, and, on being pumped into a reservoir and allowed to settle, forms a heavy film on the surface. There are said to be other indications of oil in several parts of the district, notably at Harrisville. At

Glenalvon Estate, where gas was discovered about two years ago, petroleum, it is stated, has since been identified, while there is still a flow of gas, though the bores put down have collapsed. While payable oil has yet to be found, the indications are that the field will be productive when operations on a large scale are commenced. The syndicate so far has been prospecting, and securing rights on royalty over the land, which is all held in small freehold farms. These having now been completed, arrangements are in progress to thoroughly test the field. It is expected that if payable oil exists, it will be found at depths varying from 500 to 750 feet. It may be mentioned that the prevailing rocks are sandstone, limestone and conglomerate, with belts of ironstone, this being the same class of country usually associated with the petroleum fields of America.

Coal beds of prospective value are also in evidence, one seam, two miles out of Boonah, having a reported thickness of 20 feet, while there are several smaller ones from five feet to eight feet in other places covered by the syndicate's operations. The hematite ironstone deposits may also have a potential value, while at Mount French there is a large deposit of volcanic ash which is to be tested for polishing purposes.

ROUMANIAN PETROLEUM PRODUCTION.

FIGURES FOR NOVEMBER.

The production of crude oil at the Roumanian oil fields in November amounted to 88,419 tons, against 97,973 tons in October. The production of the different oil fields was as under:—

	November. Tons.	October. Tons.
Prahova District—		
Bustenari	35,085	37,345
Campina-Poiana	19,396	21,656
Moreni	24,113	29,362
Baicoi-Tintea	4,561	4,428
Other Fields in Prahova	1,390	754
Total for Prahova	84,545	93,545
Dambovitza District	2,818	3,183
Buzeu District	756	920
Bacau District	300	325
Total	88,419	97,973

There is probably a further 500 tons to be added to the November figures to make them complete, which will bring the total up to 89,000 tons.

The production of the leading firms in November, compared to October, was:—

	November. Tons.	October. Tons.
Steaua Romana	27,715	31,134
Regatul Roman Co.	15,322	18,809
Bustenari Co.	9,465	10,515
Romano-American Co.	8,406	9,849
Telega Oil Co.	3,676	3,888
C. M. Pleyte	3,265	3,884
International Co.	3,580	3,981
Colombia Co.	2,185	2,349
Trajan Co.	2,994	3,063
Seceleanu Bros.	1,606	1,650
Naphta Co.	1,322	1,526
Aquila Franco-Romana	1,693	1,117
Arnheemsche Petroleum Co.	832	909
I. Koster	629	231
M. K. Ozinga	532	166

The Oil Resources of the Summerland District, California.

The first oil well in the Summerland field of which we have any record was sunk on the flat one-fourth mile east of Ortega Hill about 1877. This well is said to have penetrated to a depth of about 180 feet and to have encountered quicksand with oil. It was never operated. About ten years later Mr. H. L. Williams sunk two wells, one 455 feet deep, on Ortega Hill. These penetrated two oil sands. In 1891 Darling Brothers drilled a well about 1,200 feet north-west of the Summerland station and obtained a flow of gas under an 8-pound pressure sufficient to supply 17 families with fuel. A year later the same men sunk another well in the same vicinity and obtained similar results. Sometime previous to 1895 two gas wells, known as the Cone wells, were sunk in the north-western part of Summerland. Between 1891 and 1895 there was considerable activity in the field, and by the end of the latter year there were 28 productive wells, which produced 16,904 barrels of oil in 1895. Up to this time the development was confined mostly to the terrace on which the town of Summerland is located, although Mr. Williams had three wells on the beach at the west end of the town.

Stimulated by the success of the wells previously drilled, and doubtless guided somewhat by the suggestions offered by Watts in Bulletin No. 11, the development in 1896 began along the beach and finally extended out toward the ocean, the wells being drilled from wharves built out over the water. In June, 1900, there were at Summerland 305 producing wells, 59 abandoned wells, and 15 well sites at which drilling operations had been commenced. These wells yield from one to 60 barrels of oil a day, the average yield being five barrels a day. The value of the oil in 1899 was 90 cents a barrel f.o.b. at Summerland. The cost of production is said to range from 25 to 35 cents a barrel.

There were 22 companies operating and 12 wharves in use in 1899. Development continued up to about 1901 or 1902, at which time there were still about 20 companies in the field. Since 1902, owing to certain adverse conditions of price and marketing, the field has been declining. At the end of 1903 there were 198 producing wells, 114 not producing, and 100 abandoned. The approximate price per barrel at that time was 80 cents. At the present time (October, 1906) there are

189 producing wells out of the 412 which at one time or another have been drilled in this field.

The Summerland oil district is situated in Santa Barbara county, on the coast of California, between 80 and 90 miles west north-west of Los Angeles and about 350 miles south-east of San Francisco. The region mapped comprises an area of about 52 square miles, in the shape of a rectangle 13 miles in extent east and west along the shore by about four miles in width north and south. It includes at its west end the city of Santa Barbara (population 6,587 in 1900), one of the oldest settlements in California, which lies at 34° 25' north latitude and 119° 42' west longitude. The district is reached by the Coast division of the Southern Pacific Railroad, which here follows the coast, and by vessels which touch at the port of Santa Barbara. The town of

Summerland, at which the only productive oil field so far developed in the district is situated, lies nearly six miles east of Santa Barbara.

The Santa Ynez Mountains, which extend for over 60 miles from Ventura River to Point Conception, are the dominant topographic feature of the region. These mountains are part of the east-west system of ranges which pre-



AN UP-TO-DATE VIEW OF THE FIELD.

vails in the region south of the upper end of the great interior valley of California, and determines the trend of the coast along this part of the State. They terminate between Points Conception and Arguello, the two salients about which the coast bends abruptly from an east-west to a north-south trend. The mapped area embraces the south flank of that portion of the range lying back of Summerland and Santa Barbara. The mountains present a bold, rugged front and a more or less serrate crest, the variation in altitude along the summit being from 3,300 to nearly 4,000 feet. La Cumbre Peak, elevation 3,985 feet, five miles north of Santa Barbara, is the highest point in the region.

Many canyons cut the range at right angles; these are steep and narrow and in many places toward their heads have precipitous sides. They usually drain cirque-like basins, which lie close to the axis of the main ridge. Streams flow from the larger canyons and debouch over alluvial fans on to the sloping terrace which skirts the coast. In the summer these streams are comparatively small, but during the rainy season they sometimes

assume torrential proportions, and carry boulders of enormous size out on to the lowlands for distances of over a mile. The vegetation of the mountains is confined largely to dense growths of chaparral and other brush, with sycamores and alders in the canyons. Live oaks are found over the lowlands in places, especially in the vicinity of Montecito.

Back of both Summerland and Santa Barbara, between the mountains and the sea, are long comparatively flat-topped hills which rise to elevations of 600 to 1,100 feet. These ridges, and the long, low knolls which lie in the Montecito Valley between them are doubtless blocks which have been faulted up relative to the region on their north. Their north sides, coinciding with the fault zone are steep, while their south slopes are more gentle.

Mission Ridge, back of Santa Barbara, and the eastward continuation of this ridge beyond Sycamore canyon, shew marked evidence of terracing. These terraces, which are of marine origin, have been subjected to differential uplift since their formation, as is indicated by their varying elevations at different points. The highest terrace, represented by the top of the ridge, is about 850 feet above sea level in its western portion, but immediately west of Sycamore canyon it is only a little more than 750 feet; just south of the canyon the highest remnant of the same terrace lies at 666 feet, and this slopes off to a little more than 550 feet west of Montecito. This change in elevation of approximately 300 feet takes place in about two and a-half miles. On the south side of Mission Ridge there are remnants of old terraces at elevations of 600 feet at the west end and 650 feet at the east end. Traces of terraces can be seen, at elevations of 250 to 300 feet, south of Sycamore canyon. There are also evidences of terraces in the hills back of Summerland and Serena, but none as marked as those on Mission Ridge.

The lowland along the coast represents an old terrace which is in large part of marine origin. The terrace or possibly terraces, for there is no direct connection between some of the isolated flats, varies in elevation from sea level to over 150 feet—the latter being near the light-house, two miles south-west of Santa Barbara. Ortega

Hill and the little hill south-west of Ortega station are local elevations, due at least in part, to differential elevation of the terrace along lines coincident with anticlinal axes. The surfaces of these old terraces, and also nearly the whole surface of the region adjacent to the base of the Santa Ynez Mountains, are covered by detrital deposits, more or less waterworn.

Estuarine conditions are prevalent along the coast east of Santa Barbara and west of Carpinteria, and indicate local subsidence coincident in time with the elevation which has taken place over most of the coastal belt.

The valley in which the city of Santa Barbara is located is broad, and slopes gradually back from the ocean toward the north and west. The depression is due largely to structural causes, although erosion has played some part in the development of its minor features. The hills bounding this valley on the west are composed of soft Pliocene sediments which have been faulted into their present elevated position, the fault line probably being coincident with their north-eastern base.

The local relief in the group of hills back of Summerland has been due in a measure to the composition of the exposed formations, and follows in a general way the strike of the rocks, which is here north-west and south-east. The terrace on which Summerland is situated is a quarter of a mile wide and from 30 to 60 feet in elevation, and slopes gently from the hills to its western boundary, a sea cliff.

PETROLEUM IN THE ARGENTINE REPUBLIC.

According to the *Review of the River Plate* (Buenos Ayres), the Argentine Government have for some time past been carrying out a number of borings in various parts of the Republic with a view of obtaining water. A number of borings have been made in the Chubut territory, where fresh water is very scarce, and in a bore that is being made in Comodoro Rivadavia, a spring of petroleum was found at a depth of 530 metres. This discovery is looked upon as most important and the Government have decreed that no mining claims will be allowed within a radius of five kilometric leagues of the place where the find was made. Experts have been sent down to Rivadavia to report fully to the Government.

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The American Oil Market.

New York, Week ended Jan. 18th.

In the foreground of developments in the old fields yielding the much-sought high grades of crude oil stands the record attained by several producers in Ritchie county, West Virginia, under agitation. Two responded with an increased production recorded as 750 and 650 barrels respectively, while another shewed a gain to 200 barrels, but soon dropped back to its former output of 175 barrels. These wells are located in the Bonds Creek district of Ritchie county, the pay being reached in the Keener sand. The gratifying results have quickened lively interest in the locality and further operations are being pushed with vigour, the prospects being considered favourable for a pool of some magnitude. The deep sand territory of the Battelle district, Monongalia county, in the same State, has attracted keener attention and encouraging indications of oil have been disclosed. Another successful completion has been reported in the Congo pool of Hancock county, being credited with a showing for a 50-barrel producer. Lincoln county has been the scene of renewed operations and the way in which some of the recent completions have sustained a creditable production is likely to hold interest to a keen degree. Operators have also been attracted to the possibilities of Tyler county in the same State, results so far being regarded as indicative of a formation from which a pool may be developed. The Clinton lime district of Fairfield county in south-eastern Ohio has furnished nothing of particular interest during the interval. In the Payne district of Washington county a late completion is reported to be sustaining a flow of 60 barrels a day. A feature of considerable interest in the north-western Ohio end of the Lima field, says the *Oil, Paint and Drug Reporter*, is the bringing in of a gusher in the deep sand stratum near Tiffin, Seneca county, which our correspondent reports good for one thousand barrels a day. Another well in the same field maintains 250 barrels a day. Conditions in the Illinois field have not been favourable for renewed activity, the financial situation as well as the difficulty of hauling machinery and supplies to the leases acting as a decided check on operations. Our correspondent reports completions for the week as 62, with the new production of 4,053 barrels, against 104 completions and 7,789 barrels of new production during the previous week. Interest in Kentucky operations centres in the smaller fields, from which favourable results have been obtained.

REFINED AND PRODUCTS.—While the improved movement in refined for domestic account has been well sustained during the week, export requirements have not been so freely manifested, although the aggregate for the interval compares favourably with that of the declining weeks of 1907. Our record of clearances for the week just ended involves a total of 9,862,700 gallons, while that for the previous period amounted to 12,160,040 gallons. Neither has there been the same degree of activity in chartering. Engagements reported in the local market comprise 80,000 cases for Sydney and (or) Newcastle, February-March shipment, and 9,000 barrels for January shipment to Gothenburg, both New York loading, and 150,000 cases for Japan, February-March shipment, from Philadelphia. There have been no developments regarding values, unchanged quotations prevailing throughout. Quotations for crude and the products remain firm and unchanged. A material improvement in deliveries has contributed a firmer tone to the London and Liverpool markets for American and Russian lamp oils, without, however, occasioning any change in quotations. The only variation reported in the Indian markets has been a slight advance in American bulk oil at Karachi. The general tendency is, however, firmer, owing to increased deliveries. A slight reaction is recorded in American and Eastern bulk oil at Shanghai. The export movement in naphtha for the week fell back considerably, clearances aggregating 77,900 gallons, against 588,600 gallons, as previously reported.

CLOSING QUOTATIONS

CRUDE.	In cents per gallon.	Week ended	
		Jan. 11. 1908.	Jan. 18. 1908.
Pennsylvania crude in bbls.	—	—
Pennsylvania crude in bulk	—	—
Residuum, bbls. for export	—	—

CRUDE AT THE WELLS.

The quotations for oil represented by credit balances were:—
Week ended

		Jan. 18. 1907.	Jan. 18. 1908.
Pennsylvania .. ..	.. ..	\$1.58	\$1.78
Tiona .. ..	.. ..	1.68	1.78
North Lima .. ..	.. ..	0.90	0.94
South Lima .. ..	.. ..	0.85	0.89
Indiana .. ..	.. ..	0.85	0.89
Illinois, heavy, below 30 deg. ..	..	—	0.60
Kansas and Indian Ter., 32 deg. and above .. ..	.. ..	0.39	0.41
Heavy .. ..	.. ..	—	0.28
Humble, Tex. .. ..	.. ..	—	0.68
Saratoga .. ..	.. ..	—	0.67
Sour Lake, Tex. .. ..	.. ..	—	0.69
Jennings, La. .. ..	.. ..	—	0.65
CANADIAN OIL:			
Petrolia .. ..	.. ..	1.30	1.34
Oil Springs, less pipeage .. ..	.. ..	1.37	1.41

REFINED—FOR EXPORT.

		Week ended	
		Jan. 18. S.W.	Jan. 18. W.W.
Barrels, cargo	per gal.	8.75	@10.75
Philadelphia .. ..	.. ..	8.70	@10.70
Bulk, New York .. ..	.. ..	5.00	@7.00
Bulk, Philadelphia .. ..	.. ..	4.95	@6.95
Cases, New York .. ..	.. ..	10.90	@13.90
Cases, Philadelphia .. ..	.. ..	10.85	@13.85

REFINED IN CASES—110 FIRE TEST.

		Week ended	
		Jan. 11. 1908.	Jan. 18. 1908.
3,000 to 10,000 .. ..	.. ..	11.05	11.05
1,000 to 3,000 .. ..	.. ..	11.10	11.10

REFINED—JOBGING LOTS.

In barrels, pkgs. included.

		Week ended	
		Jan. 11. 1908.	Jan. 18. 1908.
120 fire test, S.W.	in barrels	12	12
130 fire test, S.W. .. ..	.. ..	12½	12½
150 fire test, W.W. .. ..	.. ..	13½	13½
In bulk from tanks .. ..	.. ..	10	10
300 fire test .. ..	.. ..	13½ @ 14	13½ @ 14

NAPHTHA AND GASOLINE.

		Week ended	
		Jan. 11. 1908.	Jan. 18. 1908.
Naphtha, crude, car. lots, 68 @ 72 deg. ..	.. ..	15.00	15.00
Gasolene, 86 deg. .. ..	.. ..	24.00	24.00

PENNSYLVANIAN OIL RUNS from Dec. 30th to Jan. 13th were:—Dec. 30th and 31st, 283,658; Jan. 1st, 72,010; Jan. 2nd, 153,360; Jan. 3rd and 4th, 263,816; Jan. 5th, 18,677; Jan. 6th, 142,157; Jan. 7th, 172,213; Jan. 8th, 166,961; Jan. 9th, 250,510; Jan. 10th and 11th, 176,902; Jan. 12th, 46,350; and Jan. 13th, 198,910.

THE DELIVERIES OF PENNSYLVANIA OIL from Jan. 1st to Jan. 14th were:—Jan. 1st, 164,768; Jan. 2nd, 138,594; Jan. 3rd, 154,231; Jan. 4th and 5th, 261,979; Jan. 6th, 188,972; Jan. 7th, 162,301; Jan. 8th, 181,439; Jan. 9th, 180,378; Jan. 10th, 188,588; Jan. 11th and 12th, 231,728; Jan. 13th, 152,287; and Jan. 14th, 199,718.

CLEARANCES FOR THE WEEK.

During the week ended Jan. 17th, and since Jan. 1, the clearances of petroleum, in gallons, from the port of New York, were as follows:—

		Week.	Year.	1907.
Refined	9,862,700	27,684,900	27,940,650	
Crude	—	500	—	
Naphtha	77,900	85,250	281,350	
Residuum	—	5,000	4,000	

EXPORT STATISTICS.

The total exports from the port of New York and from the United States have been:—

		Gallons.
From New York, week ended Jan. 17th ..	..	13,150,267
Total from New York, from Jan. 1st, 1908 ..	..	36,913,701
Same period last year .. ..	..	37,254,201
Decrease .. ..	..	340,500
From United States, week ended Jan. 17th ..	..	22,196,723
Total from United States, since Jan. 1st, 1908	62,720,914
Same period last year	66,954,748
Decrease	4,233,834

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The "Review" Shipping List.

JANUARY 31, 1908.

(The following abbreviations are used in this table:—L. Left; P. Passed; Arr. Arrived; Sp. Spoken; Tr. Trading.)

Vessel.	From.	For.	Latest Date and Position.	Vessel.	From.	For.	Latest Date and Position.
ALCHYMIST	Bayonne	Ardrossan ..	Arr. Jan. 25	EUPLECTELA	Singapore ..	Europe	At Suez,
ALEMBIC	Shoreham ..	London	Arr. Jan. 20	EXCELSIOR	New York ..	Hamburg ..	Jan. 28
ALICE ISABELLE..	Sables	Philadelphia	Supposed sailed				P. Dover,
	d'Olonne		Sables, Jan. 17				Jan. 27
AMERICAN	New York ..	Puerto.....	L. Jan. 10	EZIO	—	—	Coasting Peru
APPALACHEE	Bengkalis ..	San Francisco	At Moji,	FRANCE MARIE ..	Marseilles ..	Philadelphia	L. Jan. 4
			Jan. 13	GEESTEMUNDE ..	New York ..	Copenhagen	L. Jan. 10
APSCHERON.....	Batoum	Venice.....	P. Constant'ple,	GENESSE	London	Manchester	P. Southend,
			Jan. 26				Jan. 28
ARAL.....	Philadelphia	Dover	P. Del. Break.,	GEORGIAN	New York ..	Rouen	L. Jan. 16
			Jan. 19	PRINCE			
ARAS.....	Tyne	Philadelphia	Arr. Jan. 25	GOLDMOUTH	Rotterdam ..	Cardiff	Arr. Jan. 29
ARGYLL	—	—	Coasting U.S.	GUTHEIL	Stettin.....	New York ..	Arr. Jan. 29
			(Pacific)	HAINAUT	Alexandria ..	Antwerp	Arr. Jan. 27
ASHTABULA	Shanghai ..	San Francisco	Arr. Jan. 8	HARRY	Hull.....	New Orleans	L. Plymouth,
ASTRAKHAN.....	Hamburg ..	Tyne	Arr. Jan. 19	WADS.WORTH			Jan. 14
ATLAS	—	—	Coasting U.S.	HELIOS.....	New York ..	Hamburg ..	In Port,
			(Pacific)				Jan. 28
AUGUSTA	Tonsberg ..	Tyne	Arr. Jan. 19	HOTHAM	New York ..	Dunkirk	L. Jan. 6
AUGUST KORFF..	Manchester	New York ..	P. Eastham,	NEWTON			
			Jan. 28	HOUSATONIC	Barrow	New York ..	Wrecked, Maiden
AUREOLE	New York ..	Belfast	L. Jan. 18				Rock, Jan. 5
AZOV.....	—	—	Trading on W.C.	IMPERIAL	—	—	Tr. on Lakes btn.
			of South Amca.				U.S.A. and Can.
BAKU STANDARD	Cardiff	Philadelphia	P. Barry Island,	IOANNIS COUTZIS	Dunkirk	Piræus.....	L. Jan. 21
			Jan. 25	IROQUOIS	London	New York ..	Arr. Jan. 27
BALAKANI	Tyne	Port Arthur	Arr. Jan. 29	J.B.AUG.KESSLER	Philadelphia	Thameshaven	P. Del. Break.,
		(Texas)					Jan. 17
BATOUM	Sumatra	U.K.	At Suez,	JAMES BRAND	Philadelphia	London	Arr. Dec. 25
			Jan. 19	JULES HENRI	Marseilles ..	Philadelphia	P. Gibraltar,
BAYONNE	Batoum	Venice.....	P. Zea,				Dec. 19
			Jan. 20	KURA	Tyne	Philadelphia	L. Jan. 11
BEACON LIGHT..	Philadelphia	Amsterdam..	Arr. Jan. 27	LA CAMPINE.....	Philadelphia	Antwerp	P. Del. Break,
BEME	Bombay	Rangoon....	L. Oct. 22				Jan. 15
BLOOMFIELD	Batoum	Algiers	P. Constant'ple,	LA FLANDRE	Philadelphia	Ghent	Arr. Jan. 28
			Jan. 26	LA HESBAYE.....	Philadelphia	Antwerp	P. Del. Break.,
BORJOM	Batoum	Alexandria..	Arr. Jan. 15				Jan. 15
BRILLIANT	Philadelphia	Copenhagen	P. Dunnet Head,	LA MADELEINE ..	Algiers	Brest	Arr. June 15
			Jan. 26	LA VIGUESA	Corunna	Port Arthur	L. Jan. 5
BROADMAYNE....	Dartmouth..	Philadelphia	Arr. Jan. 19			(Texas)	
BULLMOUTH	Kobe	Takeoyo ..	L. Jan. 13	LACKAWANNA....	Kustendje ..	Kurrachee ..	P. Perim,
BULYSES.....	Rangoon....	Europe	L. Jan. 22				Jan. 11
BURGERMEISTER	Stockholm ..	—	P. Elsinore,	LANSING.....	San Francisco	Pt. San Luis	Arr. Jan. 14
PETERSEN			Jan. 27	LE COQ.....	Blaye	Philadelphia	L. Pt. de Grave,
CALCUTTA.....	San Francisco	Shanghai ..	Arr. Jan. 2				Jan. 27
CAPTAIN A. F.	Halifax	New York ..	L. Jan. 18	LOUTSCH	Batoum	Sebastopol &	L. Jan. 1
LUCAS						Odessa	
CARDIUM	Alexandria..	Batoum	P. Constant'ple,	LUCERNA	Tyne	Philadelphia	P. Dunnet Head,
			Jan. 23				Jan. 11
CATANIA	San Francisco	Astoria	Arr. Jan. 14	LUCILINE	Rouen.....	Philadelphia	P. Lizard,
CAUCASIAN	Hamburg ..	Philadelphia	P. Prawl Pt.,				Jan. 13
			Jan. 12	LUMEN.....	Port Arthur	Bouc	P. Gibraltar,
CHARLOIS	Amsterdam..	New York ..	P. Nantucket,		(Texas)		Jan. 23
			Jan. 29	LUX	Rouen.....	Philadelphia	P. Havre,
CHESAPEAKE	Philadelphia	Hamburg ..	P. Lizard,				Jan. 25
			Jan. 29	MAKKAVEL	Cette	Novorossisk	L. Jan. 18
CHESTER	New York ..	Antwerp	L. Jan. 15	MANHATTAN	New Orleans	Bremen	Arr. Jan. 16
CIRCASIAN	—	—	Trading on W.C.	MANNHEIM	New York ..	Rotterdam ..	P. Scilly,
PRINCE			of South Amca.				Jan. 29
CLAM	Singapore ..	Port Natal ..	Arr. Jan. 24	MARGARETHA ..	Hull.....	Kustendje ..	L. Jan. 16
COL. E. L. DRAKE	San Francisco	Astoria	L. Jan. 15	MAVERICK.....	Seattle	San Francisco	Arr. Oct. 6
COWRIE	Kustendje ..	Bombay	P. Perim,	METEOR	Vladivostock	Shanghai ..	Arr. Jan. 5
			Jan. 24	MEXICAN PRINCE	Cardiff	Kustendje ..	P. Barry Island,
CUYAHOGA	Manchester	Philadelphia	Arr. Jan. 23				Jan. 28
CYMBELINE	Philadelphia	London	Arr. Jan. 28	MIRA	London	Newport	Arr. Jan. 28
CZAR NICOLAI II.	Batoum	Hamburg ..	Arr. Jan. 25	MUREX.....	Tsingtan....	Singapore ..	L. Dec. 26
DAGHESTAN.....	Batoum	Antwerp	P. Dover,	NARRAGANSETT..	London	New York ..	Arr. Jan. 18
			Jan. 29	NERITE	—	—	Tr. in China
DAKOTAH	San Francisco	Hong Kong	Arr. Jan. 18				Seas
DELAWARE	Barrow	Liverpool ..	In Port, Jan. 30	NEW YORK	New York ..	Southampton	L. Jan. 25
DEUTSCHLAND ..	Bremerhaven	New York ..	L. Tyne,	OCEAN	Antwerp....	New York ..	Arr. Jan. 26
			Jan. 25	OILFIELD	Rouen.....	Philadelphia	L. Dartmouth,
DIAMANT	Tyne	Philadelphia	Arr. Jan. 28				Jan. 14
EDWARD	Antwerp....	Middlesboro	Arr. Dec. 13	ORANJE PRINCE..	Tyne	Manzanillo	At Manzanillo,
DAWSON						& Ensenada	Jan. 4
						de Morra	
ELAX.....	Samboe	Europe	L. Jan. 20	ORIFLAMME	Philadelphia	Rouen	Arr. Jan. 23
ELISE MARIE	Philadelphia	Malmo	P. Del. Break.,	OSCEOLA	Bremen	Tyne	Arr. Jan. 3
			Jan. 10	OTTAWA	London	New Orleans	At St. Michaels,
ENERGIE	Pillau and	New York ..	P. Dunnet Head,				Jan. 22
	Tyne		Jan. 15	OURAL	Batoum	Thameshaven	P. Constant'ple,
ERIVAN	Batoum	Hamburg ..	P. Tarifa,				Jan. 27
			Jan. 28	PALEMBANG	Calcutta....	Aroe Bay ..	L. Dec. 18
ETELKA	Philadelphia	Cette	L. Jan. 20				

Vessel.	From.	For.	Latest Date and Position.	Vessel.	From.	For.	Latest Date and Position.
PAULA	Philadelphia	Danzig	Arr. Jan. 26	SPONDILUS	Tyne	Singapore ..	P. Perim, Jan. 11
PECTAN	London	Emden & Galveston	Arr. Jan. 18	STANDARD	Philadelphia	Hamburg ..	Arr. Jan. 16
PENNOIL.....	Philadelphia	Rotterdam..	Arr. Jan. 26	STROMBUS	Batoum	Singapore ..	At Port Said, Jan. 27
PERLAK	Palembang..	Bolkom	L. Dec. 26	SUN	Manchester	Philadelphia	L. Eastham, Jan. 15
PHOEBUS	New York ..	Hamburg ..	Arr. Jan. 27	SURAM.....	Batoum	Antwerp	L. Jan. 25
PINNA	Yokohama ..	Gaviota	L. Jan. 29	SUWANEE.....	Tyne	Philadelphia	P. Dunnet Head, Jan. 18
POTOMAC	Philadelphia	Avonmouth..	P. Del. Break, Jan. 19	SVIET	Odessa	Alexandria..	Arr. Jan. 18
PROMETHEUS....	Rotterdam ..	New York ..	Off the Wight, Jan. 16	TELENA	Kustendje ..	Madras & Calcutta	L. Suez, Jan. 24
PRUDENTIA	Palembang..	Singapore ..	L. Dec. 20	TEREK.....	Avonmouth	Port Arthur (Texas)	P. Barry Island, Jan. 8
QUEVILLY.....	Philadelphia	Rouen.....	In Havre Roads, Jan. 28	TIFLIS.....	Batoum	Antwerp'....	L. Jan. 25
RION.....	Kustendje ..	London	P. Constant'ple, Jan. 20	TIOGA	London	Galveston ..	Off the Wight, Jan. 23
ROCK LIGHT	Cardiff.....	Kustendje ..	P. Constant'ple, Jan. 29	TONAWANDA	San Francisco	Hong Kong..	At Chingkiang, Jan. 12
ROMANY.....	Freshwater..	Europe	L. Jan. 21	TROCAS	Freshwater..	Singapore ..	L. Soesoo, Jan. 24
ROSSIJA	Tyne	Pensacola ..	Arr. Jan. 10	TURBO.....	Batoum	Hamburg ..	Ashore Haaks, Jan. 7
ROTTERDAM	Amsterdam..	New York ..	P. Dunnet Head, Jan. 27	TUSCARORA	London	New York ..	At Halifax, Jan. 28
RUSSIAN PRINCE	Philadelphia	Tampico	P. Del. Break., Dec. 24	TWINGONE	Rangoon ..	Madras	Arr. Dec. 12
SALAHADJI	—	—	Tr. Sts. Settlem'ts and Java Seas	VEDRA.....	Singapore ..	Kobe	L. Jan. 19
SAN CRISTOBAL..	Tyne	Kustendje ..	Off the Wight, Jan. 27	VILLE DE DIEPPE	Rouen.....	Philadelphia	L. Dec. 22
SAN IGNACIO DE LOYOLA	Philadelphia	Gijon	L. Dec. 27	VOLUTE	Freshwater..	Adelaide....	L. Jan. 19
SAXOLEINE	Philadelphia	Blaye and Havre	At Pauillac, Jan. 27	WASHINGTON....	Hamburg & Tyne	New York ..	P. Dunnet Head, Jan. 21
SEMINOLE.....	—	Muroran....	In Port, Jan. 1	WEEHAWKEN	Sunderland..	Philadelphia	P. Dunnet Head, Jan. 23
SINGU	—	—	Tr. in East Indies	WILLKOMMEN....	Stockholm and Tyne	New York ..	Arr. Jan. 28
SNOWFLAKE.....	Cette	Novorossisk	At Malta, Jan. 29	WINNEBAGO	San Francisco	Orient	L. Jan. 1
SOYO MARU	Antwerp	San Francisco	Arr. Jan. 6				

Latest Market Intelligence.

LONDON OIL MARKET.

Supplied by Messrs. Benjamin & Gee, 31, St. Mary Axe, E.C.

January 31st, 1908.

Refined Petroleum has fallen $\frac{1}{4}$ d. in price with the exception of the Roumanian quality, which remains as previously. The latest quotations are as follows:—Russian, $6\frac{1}{8}$ d. to $6\frac{1}{4}$ d.; American, $6\frac{3}{4}$ d. to $6\frac{7}{8}$ d.; Water White, $7\frac{3}{4}$ d. to $7\frac{7}{8}$ d.; Roumanian, $6\frac{3}{4}$ d.

LUBRICATING OILS

are unchanged, the latest quotations being:—

American pale, £7 7s. 6d. to £11.

American dark cylinder, from £9 2s. 6d.

American filtered cylinder, from £11 19s. 6d.

No. 1 Russian, £10 5s.

TURPENTINE.

American Turpentine is falling away again in price day by day, American being quoted for Spot 37s., March to June 37s. 9d., July to December 37s. 6d.

LIVERPOOL OIL MARKET.

January 31st.

Refined oils are quiet, and sellers quote $6\frac{3}{4}$ d. for Russian, Galician or Roumanian; and $7\frac{1}{4}$ d. to $8\frac{1}{4}$ d. per gallon for American.

PETROLEUM SPIRIT continues at 1s. $0\frac{1}{2}$ d. to 1s. 3d. per gallon for American deodorised, according to quality on the spot.

LATEST AMERICAN PRICES.

NEW YORK, January 30th.

Refined, in cases, is steady at 10.90; Standard White, 8.75; Credit balances, 1.78c.

PHILADELPHIA, January 30th.

Standard White is still quoted at 8.70.

RUSSIA.

BAKU, January 27th.

The Baku oil market is uncertain. Crude oil, spot, $25\frac{1}{2}$ to $25\frac{3}{4}$ copecs per pood. Residuals, spot $25\frac{7}{8}$ copecs. Kerosene, in waggons, delivery January-February, $32\frac{1}{2}$ copecs.

BELGIUM.

ANTWERP, January 26th.

The petroleum market is firm. Price of Standard White, spot, 22 francs per 100 kilos.

FRANCE.

PARIS, January 26th.

Illuminating oil is quoted in bulk, in whole tank waggons, 21 francs per hectolitre; spirit, 33.75 francs per hectolitre. Special white oil, in barrels or cans, 29 francs per hectolitre.

GERMANY.

HAMBURG, January 25th.

The kerosene market is quiet. The price of American Standard White is 7.55 marks per 50 kilos; Russian, 7.35 marks.

ROUMANIA.

January 23rd.

Crude oil from different fields, including	Franks.
pipe line charges, per 100 kgs. ...	4.20-4.25
Refined oil, exclusive of taxes ...	6.50-7.00
Benzine, 717-720, including taxes ...	20.00
Benzine, 750-760 ...	14.00
Residuals in tank waggons, at refinery ...	3.80-4.00
Paraffin ...	120.00-125.00

PRICES FOR EXPORT.

Refined oil in tank waggons, per 100 kgs.	6.50-7.00
Benzine, sp. gr. 0.710-0.715, f.o.b. ...	22.00-23.00
" sp. gr. 0.715-0.720 " ...	20.00-21.00
" sp. gr. 0.730-0.740 " ...	15.00-15.50
" sp. gr. 0.745-0.755 " ...	13.00-14.00

INDIA.

BOMBAY, January 12th.

Standard Oil Co., of New York.

Current rates are:—

American, "Snowflake," 150 deg. ..	Rs. 6 4 2
" Chester, 76 deg. ..	4 12 2
" Monkey Brand, 76 deg. ..	4 4 2
" Bulk, 125 deg. (in local made tins) ..	3 13 6
" " 125 deg. (8 Imperial gallons) ..	3 3 6

The Asiatic Petroleum Company, Limited.

Current rates are:—

Burmah oil, in tins, per pair ..	3 8 0
Russian "Rising Sun," bulk, per unit ..	3 6 0
" " tins, per pair ..	4 0 0
"Anchor" per case ..	4 8 0

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IMPORTS of PETROLEUM into UNITED KINGDOM

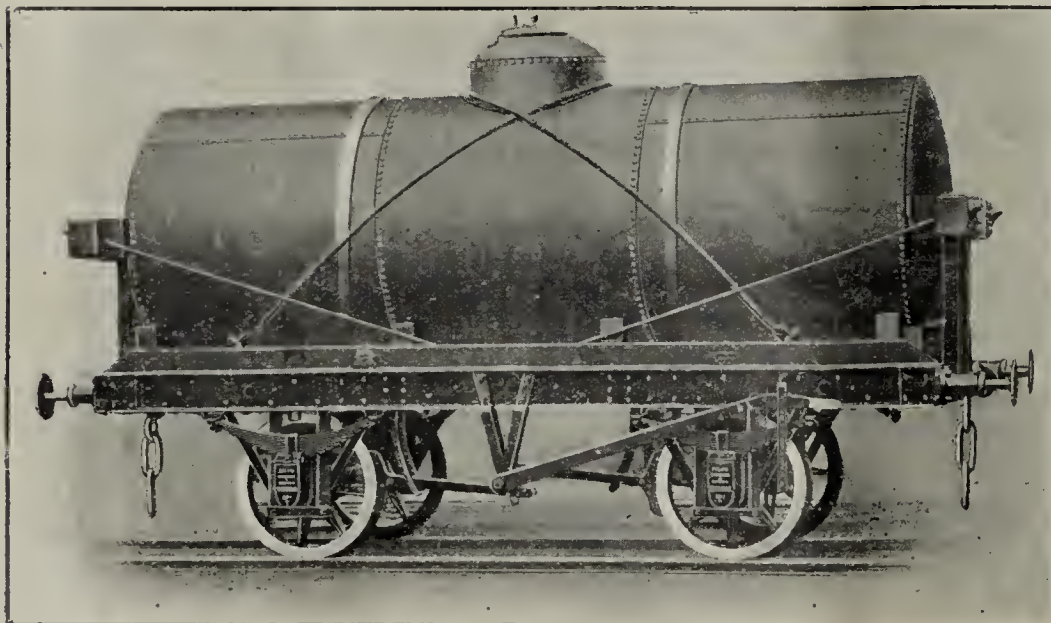
Specially prepared for .
this Journal by . . .
the Custom House. .

FOR THE WEEK ENDED 20TH JANUARY, 1908—

DATE.	PORT AND IMPORTERS.	DESCRIP- TION.	NO. OF GALS.	PORT WHENCE.
Jan. LONDON—				
14	Leach and Co., Ltd.	Lub.	90	Ghent
14	London and India Docks Co.	"	2,250	Hamburg
14	M. Record	"	8,000	"
14	Asiatic Petroleum Co. (Goldmouth)	Benzine	364,850	Pulo Samboe
14	"	"	401,230	Arol Bay
14	Ragosine and Co.	Lub.	2,700	New York
14	Mordaunt Bros.	"	9,200	"
14	Fielder, Hickman and Co.	"	23,000	"
14	"	"	3,000	Philadel.
14	Union Lighterage Co.	"	11,250	"
14	Worthington and Boler	"	4,400	"
14	W. B. Dick and Co.	"	8,500	"
14	A. Brown and Co.	"	2,000	"
14	Ragosine and Co.	"	5,000	"
15	W. H. J. Alexander	"	3,280	"
15	Produce Brokers' Co.	"	4,800	New York
15	Livett Frank and Son	"	800	"
15	Mordaunt Bros.	"	4,200	Philadel.
15	Beck and Pollitzer	"	340	New York
16	J. Spurling	"	360	"
16	Argo Steamship Co.	"	360	Bremen
16	R. Park and Co.	"	1,080	Marseilles
16	Lubricating & Fuel Oils, Ltd.	"	12,300	Antwerp
16	J. Harrison	"	240	"
17	T. H. Lee	"	190	Hamburg
17	J. Barber and Co.	Lub. Gr.	1,700	Amsterdam
17	Mordaunt Bros.	Resid.	4,200	Trieste
17	Consolidated Pet. Co. (Mira)	Lamp	713,000	Batoum
17	Mercantile Lighterage Co.	Lub.	23,400	Philadel.
17	Trinidad Lake Asp. Pav. Co.	"	2,400	"
17	Pickfords, Ltd.	Lub. Gr.	210	"
17	E. J. Walkenshaw	Lub.	6,000	"
17	Anglo-American Oil Co.	"	50,200	"
18	London and India Dock Co.	"	5,400	New York
20	A. Brown and Co.	"	3,600	Philadel.
20	"	"	960	Hamburg
20	G. Jennings	Lub. Gr.	920	"
20	T. H. Lee	"	50	"
20	London and India Docks Co.	Lub.	120	"
20	J. Owen	Tar Oil	2,020	Rotterdam
20	Page, Son and East	Lub.	400	Antwerp
20	Ragosine and Co.	"	240	"
20	R. Park and Co.	"	120	Marseilles
LIVERPOOL—				
14	C. C. Wakefield	"	240	Antwerp
14	American Line	"	11,200	Philadel.
14	Crew, Levick and Co.	M. Colza	4,120	Philadel.
14	"	Lub.	27,530	"
15	E. H. Kellogg and Co.	"	2,000	New York
15	Geo. B. Taylor	"	125,360	"
15	G. Smart	"	400	Hamburg
15	W. H. Nott and Co.	L. Paste	350	"

DATE.	PORT AND IMPORTERS	DESCRIP- TION.	NO. OF GALLS.	PORT WHENCE.
Jan.				
16	W. B. Dick and Co.	Lub.	3,300	New York
17	"	"	5,100	Philadel.
17	Worthington and Boler	"	1,800	"
17	Bowring Petroleum Co.	"	1,250	"
17	Crew, Levick, and Co.	"	29,140	"
17	"	M. Colza	10,270	"
18	Meade-King, Robinson & Co.	Lub.	12,000	"
18	Vacuum Oil Co.	"	16,000	"
18	Midland Railway	"	1,060	"
18	American Line	"	18,800	"
18	Anglo-American Oil Co.	"	517,400	"
(August Korff)				
19	S. R. B. Melling and Co.	"	1,000	New York
20	Geo. B. Taylor	"	80,960	"
20	"	"	57,440	"
20	Meade-King, Robinson & Co.	"	20,000	"
20	"	"	22,000	Baltimore
20	"	"	37,600	Philadel.
20	W. B. Dick and Co.	"	10,330	"
20	"	"	8,710	New York
20	W. H. Nott and Co.	L. Paste	240	Hamburg
BRISTOL—				
14	E. Stock and Sons	Lub.	2,000	"
15	Anglo-American Oil Co.	"	176,060	Philadel.
(August Korff)				
15	"	M. Colza	288,780	"
16	H. Pritchard and Co.	Lub.	2,000	New York
16	W. Smith and Co.	"	57,440	"
16	"	Lamp	18,520	"
17	"	"	10,240	"
17	H. Pritchard and Co.	Lub.	7,000	"
18	Anglo-American Oil Co.	Lamp	1,170,810	"
(Manhattan)				
20	Ford and Canning	Lub.	3,000	"
20	H. R. James and Sons	"	3,360	"
20	"	"	21,200	"
20	"	M. Colza	4,000	"
GRIMSBY—				
14	J. Sutcliffe and Son	Lub.	80	Antwerp
17	"	"	210	"
HULL—				
16	W. Gilyott and Co.	"	2,000	New York
16	Wilsons and N.E. Railway Shipping Co.	"	600	Antwerp
16	"	"	8,000	"
16	T. Wilson, Sons and Co.	"	49,400	New York
17	Hull & Netherlands S.S. Co.	Tar Oil	4,800	Rotterdam
18	Anglo-American Oil Co.	Lamp	595,000	New York
(Weehawken)				
MANCHESTER—				
28/12	Anglo-American Oil Co.	Gas	414,670	Philadel.
(Ottawa)				
	Meade-King, Robinson & Co.	"	575,000	Pt. Arthur
(Harry Wadsworth)				

MIDLAND RY-CARRIAGE & WAGON CO., LTD.,

Midland Works,
BIRMINGHAM.

— BUILDERS OF —

**OIL AND OTHER
TANK WAGONS,**

And Every Description of Rolling Stock

**With WOOD or STEEL
UNDERFRAMES.**

PRATT'S MOTOR SPIRIT

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For Heavy Vehicles
and Steam Cars . .

PACKED IN SEALED WHITE CANS.

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22, Billiter Street,

Tel. Address: "ADOPTION," LONDON.

Telephone Nos. 5733-7 AVENUE.

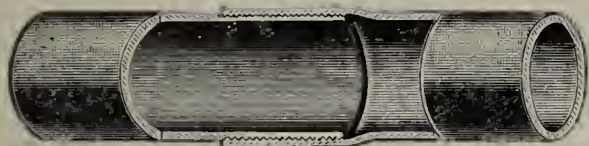
LONDON, E.C.

DEPOTS & AGENTS EVERYWHERE IN THE UNITED KINGDOM.

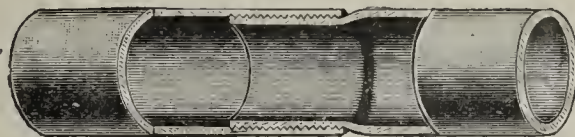


Deutsch - Oesterreichische.

MANNESMANNRÖHREN = WERKE,



DÜSSELDORF.



WELDLESS STEEL TUBES.

LONG LENGTHS.

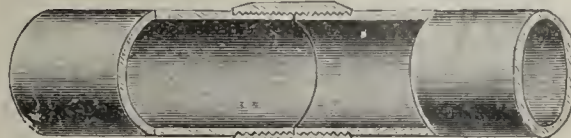
GREAT RESISTANCE.

LIGHT WEIGHT.

Well-Boring Tubes and Rods.



Pipe Lines.



DATE.	PORT AND IMPORTERS.	DESCRIPTION.	NO. OF GALLS.	PORT WHENCE.
Jan.				
14	W. Hodgson and Co.	Lub.	200	Riga
14	Anglo-American Oil Co.	Lamp	595,850	Philadel.
	(Sun)			
14	Diamond Lubricating Co.	Lub.	2,000	New York
14	Geo. Fairclough	"	1,410	"
14	Bramwell, Fern and Co.	"	4,300	"
14	Liverpool Storage Co.	"	17,040	"
14	G. B. Taylor	"	188,280	"
14	T. Hearn and Co.	"	200	"
14	J. T. Fletcher and Co.	"	140	Antwerp
14	D. Currie and Co.	"	480	Hamburg
16	Meade-King, Robinson & Co.	Lamp	231,280	"
16	D. Currie and Co.	Lub.	240	"
	NEWCASTLE—			
14	Anglo-American Oil Co.	"	20,120	New York
14	"	M. Colza	17,640	"
	SOUTH SHIELDS—			
15	Anglo-American Oil Co.	"	7,360	"
15	"	Lub.	48,400	"
	SOUTHAMPTON—			
14	White Star Line	"	47,040	"
	SUNDERLAND—			
20	Anglo-American Oil Co.	Lamp	435,210	"
	(Weehawken)			
	ABERDEEN—			
20	R. Cannon, Reid and Co.	"	2,000	Hamburg
	DUNDEE—			
16	D. Alexander and Sons	Lub.	400	"
	GLASGOW—			
14	Clyde Shipping Co.	Lub. Gr.	160	Antwerp
14	Anchor Line	Lub.	73,320	New York
14	"	"	100	"
15	"	M. Colza	12,000	"
15	Mordaunt Bros.	"	5,600	"
16	Burrell and Son	Lub.	8,000	Trieste
	GRANGEMOUTH—			
16	J. Currie and Co.	"	2,480	Hamburg
16	"	"	400	"
16	W. Graham-Yooll and Co.	Lamp	8,000	"
	LEITH—			
14	W. Graham-Yooll and Co.	"	2,180	"
14	J. Currie and Co.	Lub.	5,440	"
16	G. Gibson and Co.	"	360	Antwerp
	BELFAST—			
15	G. Heyn and Sons	Kerosene	14,000	N. Orleans
16	"	Lub.	2,000	Riga
	Total for Week		7,881,760	

Deduct to correct:—

BRISTOL—

28/12 British Pet. Co. (Cymbeline) Lamp 1,680,000 New York

FOR THE WEEK ENDED 27TH JANUARY, 1908—

	LONDON—			
22	Anglo-American Oil Co.	Gas	927,390	Sabine
	(Genesse)			
23	Fielder, Hickman and Co.	Lub.	13,760	New York
23	"	"	23,240	Philadel.
23	British Petroleum Co. (Mira)	Lamp	748,000	Batoum
24	T. H. Lee	Lub.	330	Hamburg
24	Mordaunt Bros.	"	5,000	Philadel.
25	Lubricating & Fuel Oils, Ltd.	"	14,760	"
25	Silvertown Oil Storage Co.	"	2,460	"
25	Ocean Oil Co.	"	4,920	"
25	W. B. Dick and Co.	"	5,000	"
25	Bowring Petroleum Co.	"	8,200	"
25	A. Brown and Co.	Lamp	4,000	"
25	Anglo-American Oil Co.	Gas	425,000	"
	(Cymbeline)			
25	"	Lub.	30,000	New York
25	W. Balchin	"	2,400	Hamburg
27	London and India Dock Co.	"	3,700	"
27	E. J. Walkinshaw	"	2,400	Philadel.
	BARROW—			
24	Anglo-American Oil Co.	Naph.	87,870	New York
	(Delaware)			
24	"	Benzine	282,500	"
24	"	Lamp	265,770	"
	LIVERPOOL—			
21	W. B. Dick and Co.	Lub.	17,550	New York
21	Jas. Light and Sons	"	3,000	"
21	Watson, McColl and Co.	"	4,980	"
21	G. B. Taylor	"	30,560	"
21	"	"	5,320	"
21	Vacuum Oil Co.	"	3,480	"

DATE.	PORT AND IMPORTER.	DESCRIPTION.	NO. OF GALLS.	PORT WHENCE.
Jan.				
21	Stockdale and Doel	Lub.	2,740	Boston
22	Meade-King, Robinson & Co.	"	2,600	Philadel.
22	"	"	14,400	Hamburg
22	"	"	10,600	Baltimore
23	Vacuum Oil Co.	Lub. Gr.	60	Malmo
23	Burnaby and Chantrell	"	1,460	New York
23	Huxley and Co.	Lub.	1,000	"
25	Vacuum Oil Co.	"	8,200	"
25	George B. Taylor	"	1,000	"
25	Meade-King, Robinson & Co.	"	3,000	Baltimore
25	D. Currie and Co.	"	2,400	Hamburg

BRISTOL—

21	First Anglo-Russian Oil Co.	Resid.	820	"
21	H. R. James and Sons	Lub.	2,480	New York
21	"	M. Colza	15,080	"
25	W. Smith and Co.	Lamp	19,960	"
25	"	Lub.	11,480	"
25	E. Stock and Sons	"	2,000	Hamburg

GRIMSBY—

21	J. Sutcliffe and Son	"	320	"
21	"	"	200	Antwerp
24	"	"	820	"

HULL—

22	Wilsons and N.E. Railway Shipping Co.	"	1,000	Hamburg
22	"	"	2,320	Antwerp
24	T. Wilson, Sons and Co.	"	1,760	Hamburg
24	"	"	920	Antwerp
25	"	"	19,080	New York

MANCHESTER—

21	J. T. Fletcher and Co.	"	90	Antwerp
23	Anglo-American Oil Co.	"	326,700	Philadel.
	(August Korff)			
25	W. Hodgson and Co.	Lub. Gr.	1,150	New York

MIDDLESBRO'—

21	E. Harris and Co.	Lub.	800	Antwerp
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NEWCASTLE—

21	Tyne-Tees Steamship Co.	"	3,040	"
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SWANSEA—

27	Richards, Turpin, and Co.	"	2,400	New York
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DUNDEE—

25	D. Alexander and Sons	Lamp	440	Hamburg
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GLASGOW—

23	Clyde Shipping Co.	Lub. Gr.	360	Antwerp
23	Anchor Line	Lub.	47,600	New York
23	J. and A. Allan	"	1,000	Boston

GRANGEMOUTH—

24	J. Currie and Co.	L. Paste	240	Hamburg
24	"	Lub.	4,000	"
24	"	Lamp	40	"
24	W. Graham-Yooll and Co.	"	4,000	"

LEITH—

21	W. Graham-Yooll and Co.	"	4,360	"
21	J. Currie and Co.	Lub.	140	"
21	"	"	240	Bremen
21	T. Cowan	"	20,120	Treport
23	Henderson and McIntosh	"	19,200	Philadel.
25	J. Currie and Co.	"	1,200	Hamburg
25	W. Graham-Yooll and Co.	Lamp	4,360	"

Total for Week 3,488,780
 Total for the Fortnight 11,370,540

ENGLISH PATENTS.

(Specially contributed by Messrs. EDWARD EVANS & Co., Consulting Engineers, Chartered Patent Agents, and Enrolled Patent Attorneys, of the United States, of 27, Chancery Lane, London, W.C.)

APPLICATION PUBLISHED IN GREAT BRITAIN.

Process of Producing Tar Oil Emulsions.—W. Wildenhayn.
 No. 23381 of 1906.

This relates to a process of producing tar oil emulsions and has for its object to produce an impregnating fluid from tar oil for creosoting purposes which makes it possible to saturate the cells of wood also with a proportionately small quantity of tar oil and to attain nevertheless the same effect as with the impregnating process now in use. The emulsion used contains neither alkali nor ammonia and contains the substances won in the purification of benzol with sulphuric acid of 60 degrees. These are mixed with tar oil and form soon after the addition of water an emulsion which remains constant even when exposed to heat and which is particularly suited for the impregnation of wood, as besides the tar oil the sulphuric acids contained in the mixture act as germ destroyers. The emulsion obtained may be used in any desired concentration.

The Petroleum Review.

By PAUL DVORKOVITZ.

Vol. XVIII. (New Series.)

FEBRUARY 15TH, 1908.

No. 418.

Editorial Notes.

.. In Memoriam ..

The sad news which it is our painful duty to record upon another page, of the sudden death of Mr. J. B. McClurg, the general manager of the Homelight Oil Co., Ltd., will be received by the majority of our English readers, as well as by many of our foreign subscribers, with sincere and profound regret. The removal of so prominent and highly-respected a gentleman from the arena of commercial activity creates a void which must always remain unfilled, and called away as our friend and colleague was, while in the zenith of manhood, his untimely and painfully sudden decease is a grim illustration of the fact that "in the midst of life we are in death."

Pioneers in the English Oil Trade.

In another part of the present issue of the REVIEW, we give a brief sketch of the history of a prominent firm which has played the part of one of the pioneers of the English oil trade—we refer to Messrs. Meade-King, Robinson and Co. Throughout the length and breadth of the land the firm is well known, and we are confident that the illustrated article upon other pages will be perused with more than ordinary interest. It is gratifying to find that the oil trade of this country has among its supporters such enterprising firms as the one above-mentioned, for with their direct association it is certain that no stone will be left unturned to put forward the claims of petroleum and its products upon every possible occasion.

The American Petroleum Export Trade during 1907.

As we briefly mentioned in our last issue, the export of American petroleum during 1907 shewed, contrary to general expectation, an increase over the figures for the previous year. The increase, however, is only slight, amounting to under 2,000,000 gallons, but in the value of the exports there has been considerable gain, owing to enhanced prices—the increase in the values of 1907, as compared with those of 1906, being approximately \$4,000,000. The analysis of the figures, given upon another page of this issue, shews that, although there has been during the past year a considerable diminution in the exports of crude oil from America—a decrease of over 30,000,000 gallons, the export trade in all the petroleum products has been on the increase, especially in

the case of naphthas and illuminating oil. In view of the general outcry there has recently been of the dearth of petroleum spirit in America, the figures of the exports will come to many as a surprise.

The Baku Conference.

The Baku petroleum producers and refiners have again met at their annual conference at Baku. The first sitting took place on the 31st of January, Mr. Rugevitch, Chief Government Mining Engineer for the Caucasus, being in the chair. As usual, all Government departments interested in the petroleum industry, and also the local authorities were represented. This is the twenty-fifth annual conference of the Baku petroleum industry, and, as usual, its deliberations will be watched with great interest by all people interested in the petroleum industry. Only fragmentary telegraphic reports of the proceedings have so far come to hand, and these shew that at the first sitting after the reading of the reports of the Technical Committee, a discussion, initiated by Mr. Goukossoff, arose over the activity and status of the local factory inspectors, and it was resolved to petition the Government to grant to the Chief Factory Inspector the same powers over his subordinates as are possessed by the Chief Mining Engineer. This is probably intended to obviate conflicting action on the part of factory inspectors in the case of labour disputes and in other matters. The question was also raised of abolishing the Waggon Allotment Committee, an institution which apparently became useless now, when, thanks to the restricted export and the working of the pipe line, there can be no question of shortage of tank waggons. For the present no decision was taken, but the council was authorised, in the event of the uselessness of the committee being definitely proved to petition the Government to abolish it. The housing question was also discussed and the council was authorised to expedite the work of the purchase of the necessary land and the building of the villages. A number of other important questions have been discussed, and we shall publish a fuller account of the proceedings as soon as the reports are available.

Important Move in the Lubricating Oil Trade.

A considerable stir has recently been caused in lubricating oil circles by the secession of the producing house of Lianosoff, Baku, from the syndicate that has dominated for several years the Russian lubricating oil trade in Europe. The result of this action has been the formation of the Lubricating Oil Co. of Antwerp, to whom has been granted the sole concession of the sale of all the Russian lubricating oils of Lianosoff. The Pure Lubricating Oil Co., a subsidiary company to that in Antwerp, has been formed in London to work the concession in Great Britain, and the firm of Messrs. H. P. Wheatley and Co., of London, has been appointed brokers for the latter concern. We may, therefore, look for interesting developments in the near future, and the trade generally will probably welcome competition in an article that has been so tightly regulated for so long.

LONDON OIL SHARE MARKET.

FRIDAY, FEBRUARY 14TH, 1908.

The advances on the London Oil Share Market consist of a rise of 6d. per share in Baku Ordinary to 2s. 3d. to 2s. 9d.; of 1 per cent. in European Six Per Cent. Second Mortgage Debentures to 35-38; $\frac{1}{16}$ in Spies Petroleum to $\frac{1}{8}$ to $\frac{1}{4}$, and of 6d. per share in Shell Transport Ordinary at 45s. 6d. to 46s. 6d. In the case of the latter best prices have not been fully maintained, for at one time they were quoted at 46s. to 47s.

On the other hand, Baku Preference lost $\frac{1}{16}$ at $\frac{3}{8}$ to $\frac{5}{8}$, Russian Ordinary 6d. at 2s. 6d. to 3s. 6d., and Schibaieff Ordinary shew a decline of 1s. per share at 2s. 6d. to 3s. 6d.

There are no changes to record in the other issues.

At the fortnightly carry-over, which took place on the 11th inst., the Account to be adjusted was very small, and rates of interest for continuation to end February ruled at about 5 per cent. to 7 per cent.

A comparison of making-up prices with those fixed at the end of January is pleasing, inasmuch as advances predominate, Schibaieff's improving 6d. at 3s., Preference $\frac{1}{8}$ at $1\frac{3}{8}$, Shell Transport $\frac{1}{16}$ at $2\frac{5}{16}$, and Spies 6d. at $\frac{3}{8}$.

The only declines are in Baku issues, the Ordinary having fallen 3d. at 1s. 9d., and the Preference 6d. at 3s. 3d. No change occurred in either Anglo-Russian at 1s., Russian Ordinary at 3s., the Preference at 4s., or Californian Oilfields at $6\frac{1}{16}$.

THE MOSCOW PETROLEUM MARKET IN 1907.

During the first three months of the year large contracts were concluded for liquid fuel to be delivered during the season 1907-8, *i.e.*, up to May 1st, 1908. The manufacturers have secured their necessary fuel, supplied chiefly at the following prices:—Ex tank, Moscow, in bulk, 48 copecs per pood; delivery by cart, 49-50 copecs. At the same time the spot prices were:—Moscow, bulk, ex tank, 57-58 copecs; with delivery, 58-60 copecs. In view of the high price of liquid fuel many consumers provided themselves with gas generators working with anthracite, or Diesel engines using crude oil, whilst others reconstructed their furnaces for burning anthracite.

At the end of March the shipping strike broke out on the Caspian Sea, and under its influence there was no dealing at all in April in liquid fuel. Dealing was resumed only in May at enhanced prices, namely, at Nijni-Novgorod, 44 copecs; Kineshma, $44\frac{1}{2}$ copecs; and Jaroslav, 45 copecs. The spot prices at Moscow were:—Ex tank, in bulk, 52-53 copecs; with delivery, 54-55 copecs. The summer months went by without any business being done. In November and December some purchases were effected for the Ivanovo-Voznesensk district at $44\frac{1}{2}$ -45 copecs, delivery at Kineshma. Generally, it may be considered that the consumption of liquid fuel in the Moscow district has in 1907 declined against 1906 by 30 per cent., chiefly owing to the exorbitant prices.

Crude oil was in good demand the whole year round, thanks to the introduction of Diesel engines. The price, ex tank, Moscow, was 56-58 copecs per pood. The saving in fuel was remarkable; where formerly 100,000 poods of residuals were required, 12,000 to 15,000 poods of crude oil was found sufficient to replace it, which amply repaid the heavy initial cost of the Diesel engine. The total sales of crude oil in 1907 were 30-40 per cent. larger than in 1906.

Lubricating oils maintained steady prices throughout the year, namely, machine oil, 210-220 copecs; spindle oil, 205-215 copecs; cylinder oil, 350-400 copecs; viscosine, 450-500 roubles.

The sales of benzine in 1907 were 60 per cent. larger than in 1906, due to its increased use for motor cars. The prices were:—Grosny benzine, 260-270 copecs per pood, in barrels; Baku benzine, ordinary, 280-320 copecs; Baku benzine, doubly refined, 450-500 copecs.

For kerosene the prices during the year were:—January, 140-145 copecs; February, 120-130 copecs; March, 120 copecs; April and May, 128-130 copecs; June, 130-140 copecs; July, August, September and October, 145-150 copecs; November, 140-145 copecs; and December, 150-155 copecs per pood.

THE TIN PLATE MARKET.

Messrs. Norton, Owen & Co., of 4, Bishopsgate Street Within, London, E.C., report under date February 13th, 1908, as follows:—

The improvement in this market which set in a month ago has been fully maintained. A large amount of business has been done, and there are considerable enquiries on the market for forward delivery. Owing to this and to a rise of £5 to £6 per ton on tin in the course of the past fortnight prices of tin plates have advanced, and we make values to-day as under:—

1c	18 $\frac{3}{4}$ × 14	124 sheets	110 lbs.	12/3 per box.
1c	19 $\frac{1}{4}$ × 14	120 "	110 "	12/3 "
1c	20 × 10	225 "	156 "	17/4 $\frac{1}{2}$ "

F.o.b. Wales. Tin lining and iron hooping extra.

PRODUCTION OF ENGLISH COMPANIES IN RUSSIA.

BAKU RUSSIAN PETROLEUM Co., LTD.—The production for the week ended February 1st was 240,000 poods, or 3,869 tons; and for the week ended February 8th was 237,000 poods, or 3,821 tons.

RUSSIAN PETROLEUM AND LIQUID FUEL Co., LTD.—The production for the week ended February 2nd was 293,000 poods, or 4,724 tons; and for the week ended February 9th was 258,000 poods, or 4,160 tons.

SPIES PETROLEUM Co., LTD.—The output for the week ended February 2nd was 140,965 poods, or 2,273 tons; and for the week ended February 9th, 132,710 poods, or 2,140 tons.

THE EUROPEAN PETROLEUM Co., LTD.—The production for the week ended February 2nd was 123,661 poods, or 1,994 tons; and for the week ended February 9th was 118,232 poods, or 1,906 tons.

PIONEERS IN THE ENGLISH OIL TRADE.

A BRIEF HISTORY OF THE GROWTH OF THE..

FIRM OF MESSRS. MEADE-KING, ROBINSON AND CO.

(By OUR ROVING COMMISSIONER.)

It has well been said that England owes much of its progress in trade and commerce to the enterprise which is characteristic of Englishmen, and we often wonder what position the present important trade in petroleum products in this country would stand in, had it not been for the indomitable energy and perseverance displayed by those firms who, in the early days of the growing trade, took so great an interest in it. When one remembers that, apart from the immense quantities of illuminating

sale druggists, of Liverpool. At first, the firm were general produce brokers, but very early in their career they took an interest in the growing trade of petroleum—a course which they have never regretted, for as time went on, other branches of business were laid aside in order that greater consideration might be given to the importation of petroleum products. But the path of the pioneers in the distribution of petroleum products was far from a bed of roses, and many were the difficulties



OIL TANKS AT DOCK BOARD RESERVATIONS, HERCULANEUM DOCK, LIVERPOOL.

oil which are day by day consumed throughout the length and breadth of this country, some 150,000,000 gallons of other petroleum products are annually imported, it will be immediately apparent that the trade of the importer and distributor of petroleum products has reached most bulky proportions, and ranks among the most important branches of the English import trade.

It was the privilege of the writer the other day in Manchester to gather a few brief details of the history of one of the oldest and most widely known firms of importers of petroleum products in the British Isles—we refer to Messrs. Meade-King, Robinson and Co., of Manchester and Liverpool.

Far back in the sixties—when the business in petroleum products in this country was just commencing to attain a degree of some importance—the firm was founded in Liverpool by the late Mr. Joseph Fletcher Robinson, who, previous to that time had been connected with the firm of Messrs. Robert Sumner and Co., whole-

which surrounded their path in those days—difficulties inseparable from the early stages of development in any branch of commerce.

The firm's close connection with the petroleum industry may be said to date from 1878, for it was in that year that they somewhat relinquished their business as general produce brokers, and commenced the importation and distribution of mineral lubricating oils, a branch of their business which is now one of the special features of the firm. That the moment was opportune for the laying of the foundations of a most successful business in mineral lubricating oils throughout the northern and midland districts of England is proved by the rapid growth of the firm, for it was in the early eighties that it was found necessary not only to open offices in Manchester—for up to this time Liverpool had been the headquarters—but also to establish depôts in various centres from which distribution could be facilitated. Having established themselves as mineral lubricating oil importers, Messrs.

Meade-King, Robinson and Co. took up the sale of residuum, paraffin scale and wax, and at a later period became greatly interested in the importation of motor spirit and gas oil for the manufacture of carburetted water gas.

The founder of the firm retired from active business about sixteen years ago, having previously been joined by Mr. Richard Robert Meade-King, and Mr. Richard Robinson, while a few years ago, Mr. William Smellie became associated with the company. For some time the firm acted as brokers for Messrs. Nobel's agents in London—Messrs. Bessler-Waechter and Co., and from 1900 until 1905 they were managers for the Consolidated Petroleum Co. in Manchester and Liverpool, this company having taken over Messrs.

When they first did business in petroleum, the oil tankers, each carrying their several thousands of tons of petroleum products, were vessels for the realisation of future engineering skill. All imported petroleum came in barrels: these being in small parcels and of numerous brands. Sometimes Messrs. Meade-King, Robinson and Co. had on their hands fifteen or twenty different brands of refined American petroleum, and the leakage which was inseparable from these primitive methods of package was tremendous. At that time one of the largest depôts which the firm had for barrelled oil was situated in Liverpool close to the site of the now well-known Herculaneum Dock, and the care that had to be exercised in regard to prevention of fire was an ever-present cause of anxiety to the firm.



TANK WAGGONS AT HERCULANEUM DOCK.

Nobel's business for refined petroleum and gas oils, Messrs. Meade-King, Robinson and Co. retaining, of course, their own trade in mineral, lubricating, and other oils. The arrangement with the Consolidated Co. was for a period of five years, and when this came to an end Messrs. Meade-King, Robinson and Co. again became independent importers of Russian and American refined petroleum and gas oils.

In this connection, it may be mentioned that in the autumn of last year Messrs. Meade-King, Robinson and Co. brought to this country the largest cargo of gas oil that had up to that time ever been imported into the United Kingdom. It came in the steamship "Sun," and amounted to no less than 7,000 tons.

The evolution of the English oil trade stands out in a strikingly prominent manner in the history of the firm.

Mr. Robinson tells a good story in connection with this fire danger. Night and day, the firm employed a watchman—a trusted employé—to see that no harm befell those large stacks of barrelled petroleum while in their charge awaiting distribution. One Sunday night, and contrary to general rule, Mr. Richard Robinson thought that something called him to visit the depôt. He had a presentiment that he ought to go down and see that everything was all right. Arriving at the storage yard, everything appeared to be in its normal state of safety, but the watchman—trusty servant—was not to be seen. Mr. Robinson walked round the whole of the stacks, yet was unable to see any signs or find any trace of his man. He was wondering what could have happened to him; possibly he had fallen into the river, or other harm might have overtaken him. Against

the clear sky rose the stacks of barrelled petroleum, and outlined against the light background, were evident signs of an erection above the stack. Mr. Robinson lost no time in making further investigation, and there, sitting under a slight cover extemporised was the watchman; and he was enjoying a quiet smoke. Needless to say, this was the last night that watchman watched those barrels.

As is well known, not only have the methods of storage and transportation of petroleum and its products greatly changed during the past quarter of a century, but in regard to prices there has been a distinct revolution. In times, now long passed—about 30 years ago—Messrs. Meade-King, Robinson and Co. sold hundreds of barrels of refined American oil at 2s. 2d. per gallon, while cargoes

motor car became the popular vehicle it is to-day, they sold the spirit at 4 $\frac{3}{4}$ d. per gallon, inclusive of the barrel, whilst some of their competitors even sold at a farthing per gallon less. To-day we know that three times this price is approximately the figure for motor spirit. Messrs. Meade-King, Robinson and Co. deal solely with the trade, and their various brands, all well known, are sold to the trade in exactly the same state as received from the refiners, excepting in the case of large bulk shipments of lubricating oil, when it is necessary that the products shall be clarified at one or other of the firm's installations in Liverpool and Manchester to drive off any water which may have entered the oil during the voyage.

In regard to fuel oil, Messrs. Meade-King, Robinson



LIVERPOOL DEPÔT IN 1871.

of barrelled oil, ex. freight and insurance, have in their time frequently changed hands at 1s. 6d. or 1s. 7d. per gallon. In lubricating oil, too, the passage of time has worked great changes. The first cylinder steam refined oil of 600 degrees test was sold by the firm at £34 per ton, but to-day this same oil realises only £9, and even at the latter price the oil shews some improvement upon the cylinder article of days gone by.

But while these two classes of oil have, following the natural order of things in the petroleum trade, become greatly reduced in price, there are other petroleum products which have moved in precisely the opposite direction. For instance, soon after Messrs. Meade-King, Robinson and Co. first took up the importation of benzine, and they were foremost in this respect long before the

and Co. were among the first importers of this new fuel, and to-day more than ever in the past, they recognise that once there is a reduction in the present phenomenally high carrying rates, liquid fuel is bound to go ahead among the industrial concerns. As shewing the favour with which the firm look upon the advent of liquid fuel it may be mentioned that they have lately taken over that immense 8,000-ton storage tank in Trafford Park, Manchester, for storage purposes.

Messrs. Meade-King, Robinson and Co. control storage depôts both at Liverpool and Manchester, while spread throughout the North and Midlands they have an extensive and very complete net-work of distributing installations—storages, railway tank waggons, and road cars.

In a word, the firm has a career of progress possessed

by very few firms in the English oil trade, and for the future, its prospects are even brighter than its past



RAILWAY ARCHES, PRIMROSE ROAD, BOOTLE, LIVERPOOL.

record has proved. All the partners are gentlemen who are thoroughly conversant with the petroleum industry.



STACK OF OIL BARRELS AT HERCULANEUM DOCK.

At the present time Mr. Smellie is upon a visit to the States in the interests of the company.

Profits of the Speranta Co.—The report of the directors of the Speranta Co. submitted at the recently held general meeting shows that the number of wells drilled by the Romana-American Co. on the company's properties is 39, of which 15 are productive. The 10 per cent. royalty which the company receives on the production up to 31st October, 1907, yielded a sum of 229,559 francs. The financial year 1906-7 was closed with a profit balance of 211,403 francs. A sum of 75,000 francs having been written off for depreciation there is left a net profit of 136,403 francs, out of this a dividend of 3 per cent. has been declared, absorbing 120,000 francs.

COMBINE OF BORING CONTRACTORS AT BAKU.

In recent years the contract boring business has developed at Baku to a very considerable extent. At the beginning it owed its origin to the want of capital on the part of the small firms having one or two boreholes each, who were unable to keep up their own boring staff, and spend large sums in purchasing boring rigs and implements. At present boring by contract is being resorted to also by the big firms. They prefer to deal with a contractor and thus avoid direct relations with the workmen. It is now reported that the boring contractors at Baku have formed a combine which will include all the firms both large and small. The object of the combine is to protect their common interest against petroleum producing firms on the one side and against the workmen on the other side. The number of workmen employed by boring contractors now amounts to 8,000. The syndicate has agreed upon a uniform price for contract work, and the firms have been divided into classes. For work which was formerly priced at 45-50 roubles, the contractors now receive 80 roubles and more.

The syndicate has also introduced a uniform scale of wages for labour. These wages are lower than those paid by producing firms. It may be mentioned here that the wages paid by contractors generally, other than boring contracts, are also 10 to 15 per cent. lower than those paid by producing firms.

The condition of the men employed by the boring contractors is worse than of the men employed direct by the producers in many respects. The housing question remains an unsolved problem, as the contractor frequently changes his sphere of operations. At one time he may be drilling at Balakhany, and after a while he may transfer his operations to Bebe-Aibat, while soon after he may be compelled to put his rigs up at Ramany. The position of the fitters in this respect is better than of the boring men, as the latter are not granted any housing allowance. The hospital and medical aid question is likewise still awaiting settlement in the case of the boring contractors.

The syndicate is now collectively negotiating with the men on this point. Strikes started against boring contractors mostly fail, as the individual firms cannot alter the terms prescribed by the syndicate.

The syndicate has an executive committee, an office and a general manager, who directs the whole business.

CLASSIFIED IMPORTS INTO UNITED KINGDOM UP TO FEBRUARY 10th, 1908.

IN GALLONS.

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COUNTRY.	ILLUMINATING.		LUBRICATING.		RESIDUALS.		GAS OIL. (Solar)		BENZINE.		FUEL OIL.		OTHER DESCRIPTIONS.		TOTALS.	
	Since Jan. 27.	From Jan. 1.	Since Jan. 27.	From Jan. 1.	Since Jan. 27.	From Jan. 1.	Since Jan. 27.	From Jan. 1.	Since Jan. 27.	From Jan. 1.	Since Jan. 27.	From Jan. 1.	Since Jan. 27.	From Jan. 1.	Since Jan. 27.	From Jan. 1.
Austria ...	—	—	8,000	16,000	—	4,200	—	—	—	—	—	—	—	—	8,000	20,200
Belgium ...	—	—	34,190	104,950	—	—	—	—	—	—	—	—	—	—	34,190	104,950
Canada ...	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Dutch India.	—	—	—	—	—	—	—	—	613,600	1,379,680	—	—	—	—	613,600	1,379,680
Germany ...	22,480	295,880	85,040	258,310	—	1,440	—	—	—	—	—	—	1,880	1,880	109,400	557,510
Holland ...	—	—	—	4,790	—	—	—	—	—	—	—	—	5,640	14,860	5,640	19,650
Roumania ...	823,900	1,579,900	—	—	—	—	—	2,022,350	—	966,080	—	—	—	—	823,900	4,568,330
Russia ...	516,490	2,598,490	1,760	6,610	—	—	—	—	—	—	—	—	—	—	518,250	2,605,100
U.S.A. ...	7,573,850	15,351,590	1,824,420	5,508,380	—	—	1,441,080	5,974,010	—	370,370	—	—	45,080	423,930	10,884,430	27,628,280
Other Countries	—	—	730	23,920	—	—	—	—	—	—	—	440	—	—	730	24,360
	8,936,720	19,825,860	1,954,140	5,922,960	—	5,640	1,441,080	7,996,360	613,600	2,716,130	—	440	52,600	440,670	12,998,140	36,908,060

AMERICAN PETROLEUM EXPORTS.

STATISTICS FOR DECEMBER.

According to the official publication of the Washington Bureau of Statistics, the exports of petroleum from America from the various ports during December were as under:—

	1906. Quantities. Gallons.	1907. Quantities. Gallons.
CRUDE—		
Baltimore	—	—
Boston and Charlestown	—	—
Delaware	—	—
New York	3,590	7,500
Philadelphia	5,593,717	3,100,939
Galveston and Sabine	5,970,669	2,622,625
Total	11,567,976	5,731,064
Total value for the month, 1906.. ..	..	\$688,229
" " " 1907.. ..	..	\$298,433
NAPHTHAS—		
Baltimore	1,000	500
Boston and Charlestown	—	—
Delaware	—	—
New York	283,829	453,646
Philadelphia	1,205,337	848,393
Galveston	—	—
Total	1,490,166	1,302,539
Total value for the month, 1906 .. ..	..	\$157,918
" " " 1907 .. ..	..	\$164,328
ILLUMINATING—		
Baltimore	1,392,166	300
Boston and Charlestown	12,681	25,225
Delaware	—	—
New York	43,229,902	53,597,408
Philadelphia	21,288,233	16,418,577
Galveston	187,283	2,804,972
Total	66,110,265	72,846,482
Total value for the month, 1906 .. ..	..	\$4,034,918
" " " 1907 .. ..	..	\$4,898,111
LUBRICATING—		
Baltimore	372,020	380,271
Boston and Charlestown	16,847	21,547
Delaware	—	—
New York	7,266,864	7,757,346
Philadelphia	3,481,110	3,826,699
Galveston	24,450	160,427
Total	11,161,291	12,146,290
Total value for the month, 1906 .. ..	..	\$1,411,309
" " " 1907 .. ..	..	\$1,522,247
RESIDUUM—		
Baltimore	—	—
Boston and Charlestown	—	—
Delaware	—	—
New York	14,120	20,917
Philadelphia	7,869,288	5,832,955
Galveston	286,639	1,225,698
Total	8,170,047	7,079,570
Total value for the month, 1906 .. ..	..	\$248,204
" " " 1907 .. ..	..	\$241,046
TOTAL MINERAL OILS—		
Baltimore	1,765,186	381,071
Boston and Charlestown	29,528	46,772
Delaware	—	—
New York	50,798,305	61,836,813
Philadelphia	39,437,685	30,027,563
Galveston	6,469,041	6,813,722
Total	98,499,745	99,105,941
Total value for the month, 1906 .. ..	..	\$6,540,578
" " " 1907 .. ..	..	\$7,124,165

THE EXPORTS OF AMERICAN PETROLEUM DURING 1907.

DETAILS OF THE SHIPMENTS.

	1906.		1907.	
	Quantities. Gallons.	Values. Dollars.	Quantities. Gallons.	Values. Dollars.
CRUDE—				
Delaware ..	25,911,771	1,473,863	—	—
New York ..	71,871	5,500	420,504	25,600
Philadelphia ..	62,636,172	3,812,319	75,518,259	4,798,585
Galveston ..	30,045,185	1,486,298	4,821,699	241,238
Sabine ..	—	—	7,734,154	207,777
Total ..	118,664,999	6,777,980	88,494,616	5,273,200
NAPHTHAS—				
Baltimore ..	1,000	200	1,505	303
Boston and Charlestown ..	5,220	875	18,816	3,305
Delaware ..	41,565	3,824	—	—
New York ..	12,512,596	1,235,841	16,310,755	1,870,151
Philadelphia ..	12,553,774	959,880	11,749,363	1,094,768
Total ..	25,114,155	2,210,620	28,080,439	2,968,527
ILLUMINATING—				
Baltimore ..	1,422,416	114,485	4,026,217	265,843
Boston and Charlestown ..	338,603	42,018	302,286	37,776
Delaware ..	2,625	251	—	—
New York ..	499,427,210	34,301,950	535,945,536	38,903,722
Philadelphia ..	310,016,971	16,860,418	288,163,576	16,410,530
Galveston ..	16,519,394	993,751	2,872,830	163,975
Sabine ..	—	—	13,685,558	672,564
Total ..	827,727,219	52,312,873	844,996,003	56,454,410
LUBRICATING & PARAFFIN—				
Baltimore ..	4,958,839	610,492	4,649,512	657,746
Boston and Charlestown ..	176,077	31,895	409,262	76,484
New York ..	94,329,314	12,358,999	95,483,024	12,771,107
Philadelphia ..	44,001,460	4,345,237	44,325,811	4,607,271
Galveston ..	3,249,545	454,941	30,225	5,835
Sabine ..	—	—	2,660,449	206,944
Total ..	146,715,235	17,801,564	147,558,283	18,325,387
RESIDUUM—				
Boston and Charlestown ..	535,000	26,750	464,500	14,510
Delaware ..	1,515,740	40,622	—	—
New York ..	13,428,198	421,510	2,574,869	95,997
Philadelphia ..	39,397,584	1,167,341	44,803,506	1,477,635
Galveston ..	8,415,971	253,744	1,473,585	44,208
Sabine ..	—	—	24,845,887	826,760
Total ..	63,292,493	1,909,967	74,162,347	2,459,110
TOTAL MINERAL OILS—				
Baltimore ..	6,382,255	725,177	8,677,234	923,892
Boston and Charlestown ..	1,054,900	101,538	1,194,864	132,075
Delaware ..	27,471,701	1,518,560	—	—
New York ..	619,769,189	48,323,800	650,734,688	53,666,577
Philadelphia ..	468,605,961	27,155,195	464,560,515	28,388,789
Galveston ..	58,230,095	3,188,734	9,198,339	455,256
Sabine ..	—	—	48,926,048	1,914,045
Total ..	1,181,514,101	81,013,004	1,183,291,688	85,480,634

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Deep Drilling in Kentucky.—A feature of the new work being carried out in the Kentucky fields is the deep drilling inaugurated in several sections of the State. The work is almost totally confined to the undeveloped regions. The wells will be sunk to a depth of about 3,000 feet.

THE SOCIÉTÉ FRANÇAISE DE PETROLE.

The directors of the Société Française de Petrole, Ltd., have issued a circular with regard to the company's operations in West Africa, which states:—"The Austrian drillers selected by Mr. Bukojemski, and personally known to him as first-class drillers, have proved unsuitable for the tropical climate of West Africa, and the board have had to replace them with Canadian drillers. Owing partly to this change, and for reasons of a personal nature, the board accepted the resignation of Mr. Bukojemski, but at the same time it is the wish of the directors to place on record their approval of his selection of the drilling sites and their appreciation of the manner in which he carried out the technical work. The board then arranged for Mr. Frank Drader, the general manager of the Nigeria Bitumen Corporation, who has successfully organised the operations of that undertaking, to visit the property from time to time and to take over the supervision of the operations thereon. Mr. Drader has cabled that he considers the 'prospects of obtaining oil are excellent.' On examining the two holes that were already started, and which had then reached the depths of 151 feet and 79 feet respectively, he found that the drilling in both was in an old sea bed and therefore in precisely the same formation, and on that account he advised the moving of one of the rigs further north so as to get, as

he expressed it, two chances in drilling instead of one. According to advice received by cable on February 4th, boring No. 1 has reached a depth of 236 feet, being now in hard grey sand, and No. 2 (the new boring) is down 46 feet."

IMPORTANT DEVELOPMENTS IN BURMAH.

According to the *Pioneer Mail* (Allahabad) some recent important developments are reported in connection with the petroleum industry in Burmah. A profitable outlet for benzine, manufactured in the country, has been discovered in Europe, and 800,000 gallons were shipped to Rotterdam during the last official year. This particular development, which promises to continue, is also likely to be greatly assisted by the recent decision of the Suez Canal Committee to rescind the regulation preventing the passage of benzine in bulk through the canal. Equally important is the development in connection with liquid oil fuel. The Burmah Oil Co. has considerably enlarged its refinery, and it is expected that large shipments will be made from Burmah in future years. The important work of constructing a pipe line for the conveyance of oil from the oil fields in the Magwe district to Rangoon has also been put in hand, and on completion is expected to result in a considerable increase in the output.

PETROLEUM IMPORTS INTO THE UNITED KINGDOM DURING JANUARY.

THE SHIPMENTS INTO VARIOUS PORTS.

The imports of petroleum products into the United Kingdom during January is given in the following table. It will be seen that the present year has made a very good start in regard to imports inasmuch as during the

first month no less than approximately 30,000,000 were imported, which is a substantial advance over the monthly average of imports for last year. The shipments into various ports during the month were as under:—

PORT.	Lubricating.	Illuminating.	Residuals.	Benzine.	Other Products	Fuel.	Gas.
Aberdeen ...	—	3,400	—	—	—	—	—
Barrow ...	—	265,770	—	370,370	—	—	—
Belfast ...	2,340	567,960	—	—	—	—	—
Bristol ...	414,830	3,584,660	1,440	—	313,860	—	—
Cardiff ...	—	621,000	—	—	—	—	—
Cork ...	140	—	—	—	1,880	—	—
Dublin ...	—	—	—	—	—	—	1,028,750
Dundee ...	400	440	—	—	—	—	—
Glasgow ...	260,180	—	—	—	31,600	—	—
Grangemouth ...	7,580	20,040	—	—	—	—	—
Grimsby ...	2,670	—	—	—	—	—	—
Harwich ...	430	—	—	—	—	—	—
Hull ...	311,850	3,191,050	—	—	7,200	—	—
Leith ...	97,520	27,240	—	—	—	—	—
Liverpool ...	1,723,900	1,846,320	—	—	19,550	—	691,220
London ...	509,860	5,031,110	4,200	2,345,760	2,020	40	4,940,140
Manchester ...	959,040	827,130	—	—	—	—	—
Middlesboro' ...	2,360	—	—	—	—	—	—
Newcastle ...	45,620	—	—	—	17,640	—	—
Plymouth ...	200	—	—	—	—	—	—
Shoreham ...	—	—	—	—	—	—	78,200
Southampton ...	47,460	—	—	—	—	—	—
South Shields ...	48,400	—	—	—	7,360	—	—
Sunderland ...	—	435,210	—	—	—	—	—
Swansea ...	2,400	—	—	—	—	—	—
Totals ...	4,437,180	16,421,330	5,640	2,716,130	401,110	40	6,738,310

Production of Petroleum in South-Eastern Illinois.

AN INTERESTING CHAPTER FROM A RECENT GOVERNMENT PUBLICATION.

By Mr. W. S. BLATCHLEY.

The raising of petroleum from the porous stratum or reservoir in the depths of the rocks, where it has lain for thousands of years, to storage tanks upon the surface of the earth, where it can be utilised by man, is termed the production.

The evolution of the processes involved in the present advanced methods of production from the primitive ones used by the first oil producers in the United States has been a wonderful one, and would prove a story of surpassing interest to the practical operator of to-day.

The different steps necessary to the successful development of a good oil property are many, and the tyro who enters the field against operators who had spent a lifetime in mastering the details of producing oil at a minimum cost often finds himself handicapped before he has completed his first well.

The first step necessary in the production of oil is the choosing of the locality in which the operations will be carried on. In this step it will be found that the old operator, who has watched the growth of a field from the beginning, is usually wise enough to locate his future wells within the limits of the known productive territory, provided he can procure the necessary leases. The beginner more often betakes himself to "promising" territory just outside the limits and puts down a "wild-cat" bore. Anyone who makes a special study of the oil business will soon note that the Standard Oil Co. and other large operators do little "wild-catting," but profit by the experience of the small operators who do it. "Wild-catting" must, however, be done by somebody, as there is no known method of fixing the limits of a field except by test bores put down by speculative individuals.

After deciding on a piece of territory it must either be bought outright or leased from the owner for a term of years. In most cases it is leased, usually for a period of five years or as much longer as production continues. If the adjoining territory is untested, the farmer usually receives from one-eighth to one-sixth royalty on the future production, with a stipulation that drilling is to begin within one or two years, or that a stated rental per acre shall be paid until the first well is drilled. The landowner retains all rights over the surface of the land with the exception of the portion necessarily occupied by the derricks, power houses and storage tanks. Of a farm of 80 acres not more than five need necessarily be kept from cultivation, even though it contain, in time, its full quota of wells. If a good well has been put down on adjoining territory, the farmer in the Illinois field often receives a bonus of from \$30 to \$100 an acre, or even more, in addition to the royalty and rental. In many instances the supposed rich strike in time

proves of little value. The lease expires without being drilled and the farmer is ahead a sum equal to the bonus advanced.

If, on the area leased, some good wells are developed, the lease, like the franchise of a street railway, becomes the most valuable part of the so-called "oil-property"; and with the wells already in operation is often sold for large amounts. Even though no wells are drilled on a leased farm, the lease often changes ownership a number of times before it expires.

After securing a lease, the operator must choose the site for his first well. It is usually the custom to drill at some point about 200 feet from the property line in order to first obtain the oil which might otherwise be raised by operators of adjoining leases. Various circumstances, such as the dip of the oil-bearing rock, variations in the surface level of the tract leased, the location of a permanent power house, etc., are to be considered in determining the site of the well. If wells are down on adjoining leases, the production of the first well, as compared with that of the older ones, can be used to gauge the location of future bores. If a well holds up to 10 or 15 barrels a day for three months or more the chances are that it is close to or connected with a large area of porous rock, and that better wells may be located somewhere in the immediate vicinity. The wells are usually put down 400 to 600 feet apart; that distance, in the language of the oil field, being termed a "location."

An unwritten law exists among operators that the lessee of a tract of land shall immediately put down wells when producing wells are drilled on adjoining territories. This is done to offset and protect property lines and prevent the oil underlying one tract from being drained off through another.

As to the amount of acreage to be assigned to an oil well, opinion varies greatly. On the larger leases ten acres are often given to the well. On the smaller leases one to every five acres is often drilled. One common and very good method of locating the wells on an 80-acre lease is to have them 200 feet back from the outside line and 460 feet apart. This leaves a distance of 920 feet clear in the centre, on which the power house can be erected. By this method 14 wells can be placed on each 80-acre tract, and have the centre to draw on.

Having selected a site for his first well, the operator next contracts for the drilling. If this be done with a drilling machine, as is the custom in the shallow territory of the Casey field, he does not have to build a rig and the process is much simplified. In that field the machines in use are principally the "Star" and a Parkersburg, W.Va. machine. The entire drilling outfit, machine, engine, boiler and tools, costs about

\$2,200. A number of contracting drillers, some of them owning a half-dozen or more outfits, soon flock to a new field which promises much work. Oftentimes the operators own their own machines and do their own drilling. The price for drilling in the Casey field in May, 1906, was \$1.00 per foot. The operator furnishes all drive pipe, casing, tubing, etc. The contractor pulls and resets the casing for shooting, cleans out the well and puts in tubing and rods for pumping. If his fuel and water is furnished, he received but 90 cents per foot. If a standard rig is used in drilling, as is the custom in the deeper territory of the Crawford county field, the operator must first contract for it and have it erected before the drilling begins. This rig consists of four strong uprights held in position by ties and braces and resting on strong wooden sills, which are preferred as a foundation to masonry. The derrick is used as a support for the sheave called the crown pulley, which must rest at a sufficient height to swing the heavy drilling tools free from the ground. The average height of the derrick is 72 feet, and it forms the most conspicuous object which characterises an oil field.

With the derrick are included under the term "rig" all the woodwork and its necessary iron fittings so put together that when boiler and engine are in place drilling can at once begin. The bull wheel and shaft on which the cable supporting the drilling tools is wound; the walking beam to give vertical motion to the tools, and the band wheels for transmitting power from the engines to the movable parts are, next to the derrick, the most important parts of the rig.

The construction of the rig is usually undertaken by a contractor known as a "rig builder," for a certain specified sum. In the Crawford county field in 1906 the price paid for the rig complete was \$525. After the well is completed the rig is, in most cases, left standing, though small operators often take it down and use it for another well. A considerable saving of outlay for lumber and rig irons is thus effected, but if the well stops flowing or needs cleaning out, a new rig, usually smaller and less expensive, must be built.

The drilling crew consists of four men, two drillers and two tool dressers, who work in pairs, 12 hours each. It is the duty of the driller to stay close to the mouth of the bore and attend to the drilling proper, turning the cable and the temper screw when necessary and controlling the machinery by cords and lever when changing the tools and sand pumping. The tool dresser is the helper to each driller. He fires the boiler, attends to the engine and machinery, and dresses or sharpens the bits as each in turn becomes worn.

The wages paid to drillers in the Illinois field in 1906 were \$5.00 and the tool dressers \$4.00 each per day. The contractor is responsible for accidents and failure to complete a well. The time necessary to put down a bore in the Casey field was four to five days. The shooting, tubing and connecting with power requires about two days longer. The operator connects the well with the power as soon as it is tubed by the driller. In

the Crawford county field from 12 to 14 days are required for drilling.

As soon as the porous stratum is passed through, if there is a fair showing of oil the well is torpedoed or "shot," in order to open up fissures in the porous rock and form a cavity therein into which the oil may flow. In the Illinois field it is now the custom to drill to the bottom of the oil-bearing rock, and then, if possible, gauge the shooting so that the rock will be shattered from the bottom of the drill hole to the top of, but not far above, the porous stratum. This prevents the explosion affecting the shale or other formation overlying the oil-bearing stratum and so filling up the cavity with loose *debris* and rendering the well worthless. Nitro-glycerine is the explosive used, and the amount depends largely upon the texture of the porous rock or so-called "sand." If it is hard and close pored, more explosive is necessary than where coarse and friable. In the latter case a large shot shatters too great a quantity and causes too much trouble in cleaning out after the shooting. An average shot in the Casey field is 85 quarts, though some operators persist in drilling deep and using 120 to 150 quarts in all wells. "The bigger the shot the better the well" is the motto of some of the operators in the Siggins pool.

The shooting is done by a contractor who follows it as a vocation. He is usually an agent of the company who manufactures the explosive, and often works on the percentage system, receiving from the company a stipulated sum per quart for the explosive sold.

The nitro-glycerine is hauled overland from the factory in square tin cans holding eight to ten quarts each, and stored in quantity in buildings erected in some out of the way place at various points in the oil field. When a well is ready to be shot, the agent, who does the shooting, transports in a light buckboard buggy, padded and fitted for the purpose, a number of these cans to the well. There the glycerine is poured into cylindrical tin cans, called "shells," about 5 inches in diameter and long enough to hold 20 quarts of the explosive. The average shell is 5 feet 5 inches in length. Each shell is conical at the lower end, and slightly concave at the upper. As soon as the first shell is filled, it is lowered into the bore. When it reaches the bottom the lowering line, by a special device, becomes detached and is drawn up. The second shell is then filled, and, when lowered its conical end fits into the cavity at the top of the first. In this manner each of the shells, after being lowered, rests in close connection with the one preceding. The last or top shell is fitted in a special manner with a waterproof percussion cap so arranged that it can be readily set off with an electric spark, communicated to it by a wire which is connected with a hand battery.

It is the custom in the Illinois field to remove the casing section by section after the nitro-glycerine has been placed in the bore and then reset it as soon as the shooting is over. The removal takes but an hour or two, and danger of collapsing or breaking the casing is thereby obviated.

(To be concluded.)

DEATH OF Mr. J. B. McCLURG.

The Homelight Oil Company's General Manager Passes Away.

With profound regret I have to record the sudden decease of my intimate friend, Mr. James Bryde McClurg, the general manager of the Homelight Oil Co., Limited.

The sad event took place last Friday evening, the 7th inst. Mr. McClurg had been confined to his house at Croydon for a few days as the result of a chill, which developed into pneumonia with alarming suddenness, and the end came before any of his intimate friends were aware of the seriousness of his condition.

His connection with the petroleum trade dates from 1887, when he entered the service of the Tank Storage and Carriage Co. and of the Kerosene Co., both companies being at that time agents for the Rottschields for the distribution of Russian kerosene in this country. From his first appearance in the oil trade the deceased gentleman has gained the respect of everyone who came in contact with him. His wide experience of the oil trade was unique, and this gave him the reputation for the very best expert knowledge of the distributing trade in the United Kingdom.

His organising powers have been specially proved when he was entrusted with the management of the important concern established five years ago—the Homelight Oil Co. Having gained the complete confidence of the directors of the company, he was able to utilise to the fullest extent his remarkable ability in establishing a complete organisation throughout the United Kingdom for distributing Russian oil imported by the company, and in a very short time about 180 depôts, large and small, were established throughout the country. The establishment of each branch or depôt required most careful consideration and a great amount of local knowledge, but the most important point of all was the selection of the managers for the depôts. In this connection, his foresight and knowledge of men enabled him to select the proper man for each place.

I still vividly remember the remark he made to me at the annual dinner of the Homelight Oil Co., Ltd., held at Manchester recently, that he found compensation for worry and hard work which he has had to bear in the last few years, in the fact that one could hardly point out in any of the company's depôts anyone who was not fitted for the position he occupies.

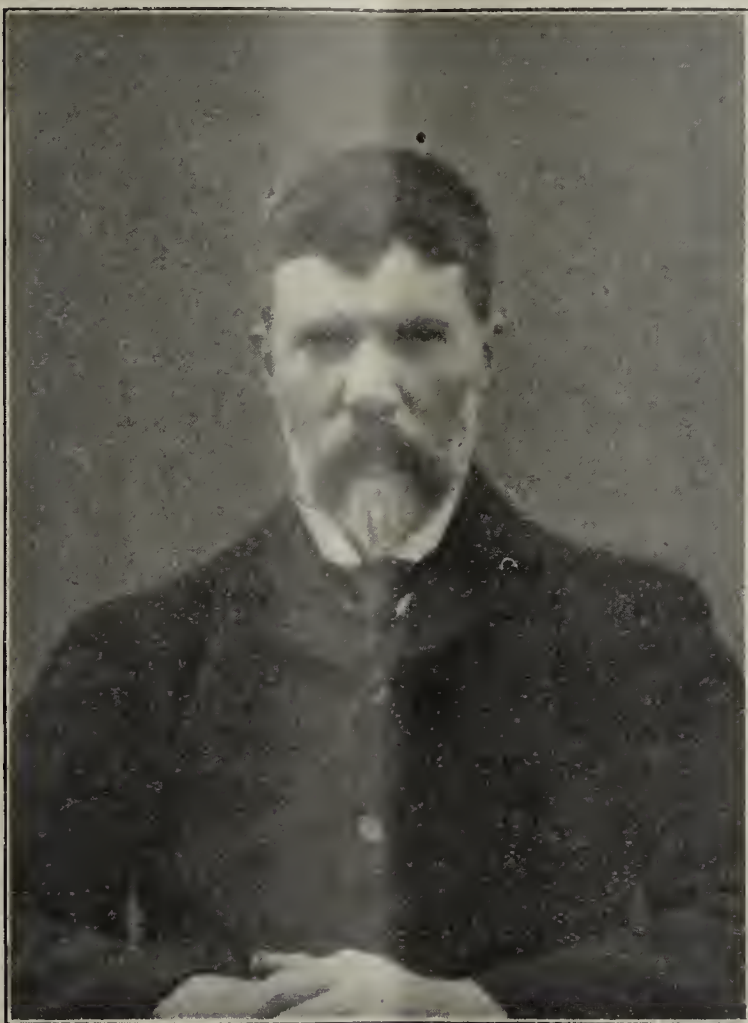
His always courteous manner and his ready sympathy

in case of need is well known in the City. In his relations to his subordinates he has been more of a friend than a master, but at the same time he has been able to get the best and most effective service out of everyone under his control. The spirit of comradeship was maintained by the deceased as the basis of the Homelight Oil Co.'s policy, which naturally extended itself to all the branches, and we see to-day a complete harmony in the relation of the central organisation to its branch managers, and of the branch managers to their own subordinates.

If the trade has lost one of its most capable workers, I, personally, have to mourn the loss of one of my most intimate and truest friends. For the last eighteen years

it was my privilege to be associated with practically all the enterprises in which he was interested. To-day, I fail to find words to express my personal grief. At some future date, however, I shall be able to give particulars of the deceased's connection with the various branches of the petroleum industry, which will undoubtedly shew that he has done a great service to the industry in this country.

P. DVORKOVITZ.



THE LATE MR. J. B. McCLURG.

The funeral of the late Mr. J. B. McClurg took place on Thursday at 1 p.m., in Croydon. In the first carriage were the mourners, Mrs. McClurg and Mr. Jack McClurg the eldest son, and also the eldest daughters of the deceased. In the second carriage were the Directors of the Homelight Oil Co., Mr. A. O. Goukassow and Mr. O. Andriassan, also Mr. C. E. Stroud, the Secretary of the company. There were two more carriages in which were the personal friends of the deceased. These included Mrs. Arthur, Mr. Jones, Mr. Carley and several others. All the branch managers attended the funeral, including Mr. Watson of Manchester, Mr. Goodall of London, Mr. Goodman of Cardiff, Mr. Bates of Hull, Mr. Peter Turner of Glasgow, and others, besides the whole of the London staff of the Homelight Oil Co. The British Petroleum Co. and the Anglo-American Oil Co. sent special representatives to attend the funeral.

Among the numerous wreaths could be noticed those sent by Mr. T. C. Burgess, Mr. John Wilson, Mr. Goukassow, Mr. Gilbert, Dr. Dvorkovitz, and Mr. Lidgitt.

LATEST QUOTATIONS OF PETROLEUM SHARES.

ENGLISH COMPANIES.

This list is restricted to companies who have paid dividends or who are producers.

Company.	Capital Paid Up.	Value of Shares.	Latest Prices.
Assam Oil	£205,000	£1	$\frac{1}{2}$ - $\frac{5}{8}$
Baku Russian Petroleum ..	£750,000 Ord.	£1	0/9-1/3
.. ..	£650,000 5½% Pref.	£1	2/3-2/9
Bibi-Eybat Petroleum Co. ..			7/3-8/3
Californian Oilfields ..	£250,000 Ord.	£1	51½-61½
Commonwealth Oil Co. Pref	18/- paid up (Prem.)		8-1pm
.. ..	Def.. £1 fully paid		17½-16
European Petroleum ..	£550,000 Pref.	£1	1/0-2/0
.. ..	£550,000 Ord.	£1	0/6-1/6
.. ..	£376,000 Deb.	£100	70-74
Russian Pet. & Liquid Fuel ..	£500,000 6½% Pref.	£1	3/3-4/3
.. ..	£600,000 Ord.	£1	3/0-4/0
Schibaieff Petroleum ..	£575,000 6% Pref.	£5	1¼-1½
.. ..	£575,000 Ord.	£1	2/6-3/6
Shell Transport & Trading ..	£2,000,000	£1	45/0-46/0
.. ..	£1,000,000 Pref.	£10	10½-10¾
Spies Petroleum Company ..	£312,500	10s.	7/9-8/9

RUSSIAN COMPANIES.

Company	Nom. Value in Roubles.	Quotations on Feb. 10th.	
		Lowest Roubles.	Highest Roubles.
Baku Naphtha Co.	100	557	560
Balakhany Naphtha Co. ..	250	—	—
Caspian Society	1,000	4,300	4,350
Mazout Co.	250	400	—
Melikoff, A. C.	250	—	—
Mirzoeff Bros.	250	—	—
Naftalan Co.	250	325	—
Naphtha Co. "Kavkas" ..	250	—	—
Naphtha Trading Co., A. I. Manta-			
cheff & Co.	250	155	—
Neft Co.	250	190	—
Nobel Bros.	5,000	10,250	11,350
.. ..	250	565	568
Rops and Co. V... ..	250	300	—
Russian Naphtha Co. ..	250	100	—
Society Mazout	250	—	—
Ter-Akopoff Co.	250	—	—
Tumaieff & Co., J. G. ..	250	—	—
Volga-Caspian Naphtha and Trading Co	250	—	—
.. .. (Second Issue)	250	—	—

SCOTCH COMPANIES

Supplied by Messrs. MACLEAN AND HENDERSON, STIRLING.

Company.	Capital Paid Up.	Value of Share.	Latest Prices.
Broxburn Oil Co., Ltd., Ord. 17/- pd	£235,000	£1	£1 18s. 6d.
Do. 6% Cum. Pref. ..	£100,000	£10	£12 7s. 6d.
Burmah Oil, Ord.	£1,100,000	£1	£3 15s. od.
Do. Pref.	£250,000	£1	£1 6s. od.
Dalmeny Oil Co., Ord. (7 paid) ..	£37,800	£8 10s.	£5 10s. od.
Do. 5% Pref. ..	£18,900	£7	£4 13s. od.
Oakbank Oil Co., Ltd., Ord.	£170,000	£1	£1 14s. od.
.. .. (17s. paid)			
Pumpherton Min. Oil Co., Ltd., Ord.	£110,500	17s.	£12 17s. 6d.
.. .. (17s. paid)			
Do. 6% Cum. Pref. ..	£100,000	£10	£13 5s. od.
Tarbrax Oil Co., Ltd. Ord. (£1 pd.)	£38,350	£1	£2 15s. od.
Do. 6% Cum. Pref. ..	£35,000	£1	£1 3s. od.
Young's Paraffin Co., Ltd., Ord. ..	£452,808	£4	£3 10s. 6d.
Do. "B" Deb. ..	£150,000	£100	£152 10s. xd

DUTCH COMPANIES.

Company.	Latest Quotations (per cent.)	Florins
Arnhemsche Petroleum Mij.	45	1,000
Aurora (Deb. 5%)	80	—
Campina Poiana Mij.	—	—
Dordtsche Petroleum Mij. (Pref.) ..	128½	50
.. .. (Deb. 4½%)	101¼	1,000
Gaboës	2½	—
Holl. Rumeensche Petroleum Mij. ..	16	1,000
Int. Rum. Pet. Mij.	78	500
Java Petroleum Mij. (Ord.)	—	1,000
.. .. (Pref.)	19¾	—
Koninklyke Nederl. Pet. Mij. Shares ..	287	250-1,000
.. .. Share certificates ..	285	1,000
Mœara Enim Petroleum Mij.	141½	100
.. .. 1-1,000 Oblig. 5	—	250-1,000
" Moesi Ilir " Petroleum Mij.	—	—
Nederl.-Rumeensche Petroleum Mij. ..	3¾	—
Nieuwe Ned. Petroleum Mij. And. ..	—	1,000
Oliebronnen in Hannover Mij.	48	—
.. .. (Deb. 5 %)	88½	—
Panolan Maatschappij Cert.	282½	—
Perlak Petrol. Mij. (6% cum. pr. A.) ..	134¾	1,000
.. .. (Common)	—	—
Sumatra-Palembang Petroleum Mij ..	93½	500
Tarakan Petrol Mij.	25	—
Zuid Perlak Petrol. Mij. (Pref.) ..	89¾	—

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War & India Offices.

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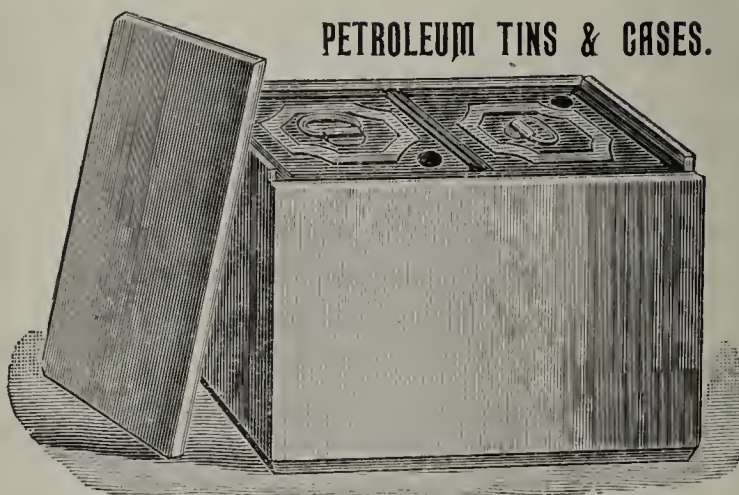
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Tins and Cases for the shipment of Petroleum and other liquids. These tins are made double seamed all over with solid corners.

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Telegraphic Address:—

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have been chiefly engaged in importing oils in barrels from the various countries.

Undoubtedly a great many of these brokers had to give way before these new methods of distribution, and to disappear as dealers on the market. A few, however, of the more advanced oil firms, prominently among them Messrs. Meade-King, Robinson and Co., Thomas Beard and Son, Mordaunt Bros., and others, have been able to maintain to the present day their position and influence in the trade.

At the commencement of their operations the two big importing companies mentioned above practically limited their activity to a few of the more important ports in the United Kingdom in the hope that the brokers and oil merchants who were still active then would adopt some more energetic and more effective means of delivering the oil to the consumers. These hopes, however, were not realised, and the importing companies found themselves compelled to organise the distribution of their products, and gradually we see the development of enormous distributing organisations with central installations and local branches covering the whole of the United Kingdom, first by the Anglo-American Oil Co., then by the Anglo-Caucasian Oil Co., Ltd. (now the British Petroleum Co., Ltd.), and finally by the Homelight Oil Co., Ltd. Now we have something like a thousand depôts, large and small, belonging to the above companies spread all over the United Kingdom, each one having special men who devote the whole of their time to canvassing the consumers. There can be no doubt that it is chiefly thanks to this organisation that, in spite of the severe competition of gas and electricity, lamp oil still occupies a prominent position as an illuminant in this country.

At the same time the turnover of trade by the leading oil brokers has in no way diminished in comparison with what it was thirty years ago. It is quite true that the profits may not be as large as they were then, but against this we have to take into account the fact that the possibility of loss is practically eliminated from the brokerage business, which was not the case in former times.

In the case of Messrs. Meade-King, Robinson and Co. we have a striking example of a private oil firm, who thanks to their foresight in organising their business on progressive lines, have succeeded not only in maintaining their position as leading oil merchants, but have increased their business by leaps and bounds, and to-day are recognised by the big importing firms as an important factor in the trade. Undoubtedly the energy and perseverance displayed by this firm have been amply rewarded and have further served as an encouragement to a great many other private firms to continue their connection with the petroleum trade. It is our firm belief that the trade as a whole can only gain by having at its disposal a number of energetic and capable individuals and firms, and those who are possessed of these qualities need not fear to devote them to the petroleum trade. Experience has shewn that everyone who has worked earnestly and intelligently in the petroleum trade has had his efforts amply rewarded.

BENZINE TRANSPORT IN RUSSIA.

A conference has recently been held in St. Petersburg at the Railway Department with the object of revising the rates in force for the transport on the Vladicaucasian Railway of benzine and ligroin from Grosny to Novorossisk. The chairman, Mr. Shaposhinkoff, member of the Railway Tariff Committee, in opening the conference, said that, beginning from last year there was a continuously growing demand for benzine from abroad, chiefly for use as motor spirit, and in view of this the Baku Petroleum Association addressed a request to the Government to reduce the rate for the carriage of benzine for export *via* Batoum or Novorossisk. The question was considered by the Tariff Committee of the Railways last October, and the committee, taking into consideration that the then existing conditions of the trade in benzine on foreign markets would enable Russian exporters to export benzine and ligroin at the rates in force for kerosene, recommended that the rates for ligroin on the distance from Baku to Batoum, Baku to Novorossisk, and Petrovsk to Novorossisk shall be the same as the export rate for kerosene, and for benzine 2 copecs more shall be charged for the trip than for kerosene. These reduced rates came into force on January 16th (o.s.). The question then arose of adjusting the existing low rates for the transport of the same class of products from Grosny to Novorossisk with the newly established rates for the Baku products. The existing rate works out at a total charge of 9'41 copecs per pood for ligroin and 16 copecs per pood for benzine, and these it is now proposed to raise to the level of the rates from Baku.

The representatives of the Grosny petroleum industry maintain that it is absolutely impossible to raise the rates either for benzine or ligroin. On the other side the representatives of the Baku petroleum industry and the representatives of the railways considered the raising of the rates absolutely necessary. The representatives of the Baku firms declared that if the low rates were maintained for Grosny, the rates for Baku benzine ought to be reduced accordingly. The representative of the Vladicaucasian Railway was of the opinion that the rate for ligroin might be raised, but the rate for benzine must remain unchanged.

The representative of the Vladicaucasian Railway also raised the question of modifying the specification for benzine and ligroin in regard to specific gravity. He proposed that for benzine the specific gravity shall be raised to 0'712, and for ligroin from 0'712 to 0'765. All the members of the conference, with the exception only of the representative of the Vladicaucasian Railway, declared themselves against any change in the specifications as to specific gravity. For final decision these questions will be submitted to the tariff committee.

THE GALICIAN PETROLEUM INDUSTRY IN 1907.

Annual Report of the Petroleum Association.

The year 1907 will undoubtedly stand out prominently in the history of the Galician petroleum industry. From the economic point of view the first and second halves of the year present a striking contrast. In a way the unfavourable conditions of the second half were the result of the comparatively favourable conditions of the first half. Such sudden change from good to bad, within a few months, is only possible in the petroleum industry and forms its special characteristic.

The year began under very favourable conditions for the Galician industry. The Petrolea Co., under the patronage of the Kreditanstalt, succeeded in uniting round itself the bulk of the purely crude oil-producing firms. The representative committee of producers, which was entrusted with the sale of the crude oil and the direction of the commercial policy, began to work for an advance in crude oil prices. The production at Boryslaw-Tustanowice remained at a constant level. The refiners' cartel took up the crude oil under contracts made in 1906. The actual deliveries of the crude oil were, in fact, in excess of the output, the difference coming out of stocks.

The organisation of the Petrolea soon, however, began to shew weak spots, which threatened to destroy it; the firms, which are both producers and refiners, continued to delay their adhesion to the organisation in spite of all the efforts of the Kreditanstalt. The purely refining firms began to buy their crude oil in the open market outside the Petrolea, and the prices paid for outsiders' oil were in excess of the advances made by the Petrolea. In consequence of this the crude oil producers who were still outside the organisation shewed no inclination to join it, and those who had already joined began to think how to get out of it. Then the Petrolea commenced its tactics, with a view of limiting the supply of outsiders' oil, to buy the same up for its own account and offered higher prices for it than the refineries. In this way the organisation itself involuntary, yet effectively, supported the outsiders. In the result the outsiders came off better than the producers in the combine, for whilst the latter received on their oil an advance of only 27½ kronen per ton the outsiders' oil, not only spot, but for months in advance, was sold at 40 kronen and more. In May the refiners' cartel broke up, but another group was soon formed of the purely refining firms and called the "Union" group, which began to buy crude oil from the outsiders, and the Petrolea and the Union for a time kept on bidding against each other for the outsiders' crude oil. In view of the enhanced price of crude oil on the open market, the executive committee of the Petrolea declined the offer of the combined refiners to buy a considerable quantity of crude for export purposes at a reduced price. The situation became daily more acute. The refineries bought up the last remains of the outsiders' crude oil, and found themselves even compelled to restrict the export of refined oil, and a shortage of crude oil began to

be felt on the market. The Petrolea, on the other hand, was compelled to store constantly growing quantities of crude oil, all the available storage accommodation was getting filled up, and at the same time the fund of 11,000,000 kronen set aside by the Kreditanstalt for advances on crude oil was exhausted, and the Kreditanstalt offered the alternative: either that the organisation should secure the control of 95 per cent. of the production, or the agreement about advances to be cancelled. Even then the producers failed to grasp the seriousness of the situation, and at the critical moment failed to support the organisation, which in consequence came to an end on the 30th of June. The advances which the Kreditanstalt was bound to continue for two months longer were reduced to 22½ kronen per ton. In August the production at Tustanowice began to increase rapidly; the Wilno well alone began to throw out 800 tons daily. A shortage of storage accommodation began to be felt. The price of crude oil fell to 11-12 kronen per ton. Excited selling of crude oil began in the open market, and continues to the present day. The oil is sold under cost of production, just to get rid of it and cover current expenses.

This state of affairs was produced chiefly by the shortsightedness of the producers, who, from selfish motives, declined to join the organisation at the proper moment, also to the mistaken, although well meant, policy of the Petrolea of offering special privileges and bonuses to those who obstinately held outside the organisation, also through the efforts of the Union group of refiners directed against the producers' organisation, and finally, the want of a financial institution, which could afford to risk an amount of capital corresponding to the present magnitude of the petroleum industry, in order to dominate the whole market. The scarcity of ready money throughout Europe brought about by the financial crisis in America no doubt also contributed to aggravate the condition of the Galician petroleum industry.

The report then proceeds to deal with the action taken during the year by the association on various questions affecting the petroleum industry. The association took a prominent part in the agitation among the producers in favour of joining the Petrolea, and although unsuccessful, did its best to prevent the disruption of that organisation.

Under the leadership of the association deputations were organised to the provincial and Imperial Governments to ask for measures to relieve the crisis. The Galician Provincial Diet was the first to come to the aid of the petroleum industry with a vote of 1,500,000 kronen for the construction of public storage tanks. These tanks are now in course of erection and will probably form a nucleus for the establishment of a new producers' organisation. The memorandum presented to the Imperial Government asked chiefly for measures to facilitate the transport of crude oil. The specific

measures asked for were:—(1) Enlargement and better equipment of Boryslaw railway station; (2) increase the number of tank waggons belonging to the State railways; (3) reduction in the rate for transport of crude oil intended for fuel purposes. The Government have shewn themselves ready to assist the petroleum industry in every possible way. The Minister of Finance in his budget statement referred to the needs of the petroleum industry. The work of enlarging Boryslaw station is already in progress, although it is considered that the sum assigned for the purpose is inadequate. The Government have also decided to provide an additional number of tank waggons for the transport of fuel oil, but the orders for same have not yet been placed. The question of a reduced rate for carrying fuel oil is now under the consideration of the Ministry of Railways. A special representative of the Ministry came to Boryslaw to investigate the matter on the spot, and it is intended to reduce the rate to those stations where the oil fuel would have to meet serious competition from coal.

The association has devoted considerable attention to the question of the use of oil for fuel purposes, which is the only permanent remedy against the recurring crises of over-production. The coal famine now reigning in Austria offers an exceptional opportunity for making the use of oil general throughout the country. The association has published pamphlets in Polish and German, setting out the advantages of oil fuel, and circulated the same among all manufacturers and other large users of fuel in Austria-Hungary.

The association also took the initiative in the creation of a special association for promoting the use of liquid fuel under the name of "Ropal," which has in a few months been successful in gaining over to liquid fuel some very important manufacturing works, including the Roof Tile Factory at Kolomea, the abattoirs at Lemberg, and a number of spirit distilleries. Much could be done in this direction, provided an agreement could be arrived at among the producers to dispose of a certain part of their output for fuel purposes at a price which would enable it to compete with coal. At the present prices of coal fairly good prices could be obtained for fuel oil.

The report further refers to the useful action taken by the association to influence favourably legislation affecting the petroleum industry, such as mining laws and regulations and taxation. Special mention is also made of the work done by the association towards organising the representation of the Galician petroleum industry at the recently held Petroleum Congress at Bucarest, and the petroleum exhibition held in conjunction with it. Galicia was very prominently and numerously represented at the Congress, where it was unanimously resolved that the next International Petroleum Congress shall be held at Lemberg in 1910. In this matter the association has an enormous organising task before it, which will require also considerable financial means.

In conjunction with the Union of Austrian Petroleum Refiners the association has during the year made representations to the Government against the proposed

reduction in import duty on vaseline, cylinder oil, etc., which was asked for by certain firms importing American lubricating oils. The association also protested against the duty-free importation of certain waxes, which influenced the prices of mineral wax.

Among the other very useful work done by the association during 1907 was the supporting of the candidature and securing the election to the Imperial Parliament for the Drohobycz district of Mr. Zaranski, who will represent there the interests of the petroleum industry. His presence in Parliament has already proved of great assistance in getting the Government to listen more attentively to the representations of the petroleum producers and refiners.

ROUMANIAN PRODUCTION IN DECEMBER.

We have now before us the provisional figures of the production in December of crude oil in the Prahova district of Roumania, which supplies the vast bulk of the Roumanian production. The output was 88,436 tons in December, against 84,750 tons in November.

The production of the various fields in the Prahova district in December, compared to November, was as under:—

Prahova District—	December. Tons.	November. Tons.
Bustenari	36,733	35,291
Campina-Poiana	21,598	19,395
Moreni	23,710	24,113
Baicoi	2,548	2,227
Tintea	2,277	1,334
Other Fields in Prahova..	1,570	2,390
Total for Prahova	88,436	84,750

The production of the leading firms in Roumania (Prahova only) in December, compared to November, was:—

	December. Tons.	November. Tons.
Steaua Romana	25,505	26,686
Regatul Roman Co.	18,958	15,322
Bustenari Co.	9,470	9,465
Romano-American Co.	7,030	8,406
Telega Oil Co.	3,818	3,676
C. M. Pleyte.. .. .	3,064	3,265
Trajan Co.	2,800	2,994
Colombia Co.	2,189	2,185
Aquila Franco-Romana	1,687	1,693
International Co. (at Bustenari only)	1,534	1,452
Naphta Co.	1,463	1,322
Secoleanu Bros.	1,366	1,606
Alfa Co.	1,068	417

On the basis of the above figures and other information the *Moniteur du Petrole Roumain* has been able to publish the following figures of the total production of some of the leading Roumanian firms in 1907, compared to 1906:—

	1907.	1906.	Increase or Decrease.
Steaua Romana	355,634	273,791	+81,843
Regatul Roman Co.	198,588	111,631	+86,957
Bustenari Co.	129,054	132,818	- 3,764
Romano-American Co.	88,181	43,495	+44,686
Telega Oil Co.	49,451	55,382	- 5,931
International Co... .. .	42,313	42,116	+ 197
Trajan Co... .. .	41,267	22,473	+18,794
Astra Co. (C. M. Pleyte)..	35,122	37,735	- 2,613
Colombia	30,719	27,784	+ 2,935
Aquila Franco-Romana ..	18,833	13,479	+ 5,354
Naphta Co.	11,329	9,961	+ 1,368
Arnheemsche Petroleum Co.	11,213	12,289	- 1,076

In our next issue we expect to be able to publish the complete figures of the Roumanian production during 1907.

PETROLEUM TRADE OF BATOUM DURING NOVEMBER AND DECEMBER.

The export operations of the port of Batoum during November (o.s.) were far from satisfactory, the total shipments having amounted to only 2,756,000 poods. The decline was general both in illuminating oil and other products. In the case oil exports the decline was greater even than in bulk oil shipments, whilst bulk oil shipments amounted to 1,517,000 poods, the quantity of case oil shipped being only 527,000 poods. The greatest decline occurred in lubricating oil, the 527,000 poods shipped representing only half of the normal monthly quantity. The price of case oil fluctuated between 160 copecs at the beginning and 180 copecs and more towards the end of the month. The deliveries of oil from Baku were good, and considerably exceeded the shipments. The following are the figures of arrivals of oils from Baku, shipments from Batoum in November and stocks at the latter place on December 1st:—

	Arrivals from Baku. Poods.	Shipments from Batoum. Poods.	Stocks on Dec. 1st. Poods.
Refined Kerosene ..	3,426,000	2,044,000	2,714,000
Kerosene Distillate ..	—	—	107,000
Gas Oil	60,000	—	113,000
Machine Oil	542,000	406,000	911,000
Spindle Oil	106,000	109,000	209,000
Cylinder Oil	28,000	10,000	46,000
Vaseline Oil	—	—	90,000
Residuals	234,000	185,000	376,000
Other Products ..	72,000	2,000	7,000
Total	4,468,000	2,756,000	4,573,000

Of the total quantity of kerosene which arrived from Baku in November, 390,000 poods came in tank waggons and the rest through the pipe line.

The exports were divided among the different consuming countries as follows:—British ports, 581,000 poods; France, 217,000 poods; Italy, 66,000 poods; Alexandria, 415,000 poods, which included one case oil cargo for the Mantascheff Co.'s depôt; Turkey, the Balkan States and Crete took together 451,000 poods; to Odessa there were shipped three cargoes of an aggregate of 307,000 poods. There were no shipments at all to Germany in November.

December, contrary to all expectations, did not bring much improvement into the petroleum export trade, and the total shipments were only 2,431,000 poods. Judging by the trade of the early part of the month it might have been expected that towards the end of the month the export trade would assume considerable dimensions, more particularly as many of the exporting firms had some cargoes to make up to fulfil their yearly contracts. The turnover in bulk illuminating oil was only 1,302,000 poods, of which 25 per cent. went to Russian ports and 25 per cent. to Alexandria, so that for the European markets there were left barely 600,000 to 650,000 poods. Somewhat more normal was the trade in case oil, which had a turnover of 427,000 poods. The prices for case oil were not subjected to any great fluctuations and ranged between 190 and 195 copecs per case. The shipments of lubricating oils were 520,000 poods.

The following are the figures of the arrivals of oils

from Baku, shipments from Batoum in December, and stocks on 1st January:—

	Arrivals. Poods.	Shipments. Poods.	Stocks on Jan. 1st. Poods.
Refined Kerosene ..	2,760,000	1,729,000	4,127,000
Kerosene Distillate ..	—	—	32,000
Solar Oil	84,000	—	73,000
Machine Oil	601,000	391,000	1,126,000
Spindle Oil	70,000	47,000	106,000
Cylinder Oil	2,000	23,000	29,000
Vaseline	—	59,000	69,000
Lubricating Oil Residuals	—	—	12,000
Residuals	148,000	179,000	252,000
Other Products ..	53,000	3,000	5,000
Total	3,718,000	2,431,000	5,831,000

Owing to the small shipments the arrivals proved in excess and caused an increase in the stocks of illuminating oil to 4,127,000 poods, the largest part of which belongs to Nobel Bros. The same happened to lubricating oils. Hitherto the brisk shipments of machine oil prevented the accumulation of stocks, which have not for a long time touched the figures to which they rose in December, namely, 1,100,000 poods. Such a change was bound to affect the distribution of the exports among the different foreign markets, and only half of the exports for the month went to European markets, whilst usually they take about three-quarters of the total exports. To England there was shipped one cargo of 326,000 poods for the Consolidated Petroleum Co. The shipments to Germany, owing to the lubricating oil cargoes, rose to 478,000 poods, and to France 222,000 poods. The exports to Belgium and Holland were unusually small, not more than 219,000 poods. To the island of Crete and Turkey there were shipped 448,000 poods, chiefly case oil.

BREATHING APPARATUS FOR WORK IN OIL TANKS.

Upon our advertising pages, readers will notice that reference is made to the smoke helmets, respirators, and breathing apparatus designed for work in oil tanks, and manufactured by Messrs. Siebe, Gorman and Co., Ltd., 187, Westminster Bridge Road, London, S.E. Some quarter of a century ago, the firm first introduced their smoke helmets which to-day are known throughout the world, but since that time various respirators and breathing apparatus have been manufactured by them in order to meet the demand for simple headgear which may be used by all persons working in mephitic atmospheres.

The use of such apparatus in connection with the petroleum trade has of late considerably grown, and for those who work in oil tanks, upon petroleum steamers, or in the primitive type of hand-dug wells, the advantages of such appliances are self-evident. The apparatus, it should be mentioned, has been designed not only to give the wearer an ample supply of fresh air, but also with a view of eliminating the vitiated air or products of respiration—a matter of the greatest importance.

Messrs. Siebe, Gorman and Co. will gladly forward their illustrated catalogue upon application.

THE PETROLEUM TRADE OF GERMANY DURING 1907.

The following were the imports of various petroleum products into Germany during 1907:—

	Tons.
Illuminating oil	994,414
Lubricating oils	226,609
Crude benzine	110,791
Refined benzine	7,040
Crude oil	26,944
Gas oil	14,075
Patent turpentine, etc.	977
Residuals	831
Heavy motor spirit	92
Total	1,381,773

The total imports from the different producing countries to Germany during the year were as under:—

	Tons.
United States	948,739
Russia	173,066
Austria-Hungary	128,422
Dutch-India	76,994
Roumania	46,915
Other Countries	14,637
Total	1,381,773

The quantity of various products imported from each of the principal producing countries is shewn below:—

United States—	Tons.
Illuminating oil	813,828
Lubricating oil	114,945
Crude oil	18,833
Benzine	1,133
Total	948,739
Russia—	
Illuminating oil	72,149
Lubricating oil	86,372
Benzine	14,238
Residuals and gas oil	307
Total	173,066
Austria-Hungary—	
Illuminating oil	81,905
Lubricating oil	21,759
Benzine	6,593
Gas oil	13,897
Crude oil	3,793
Residuals	475
Total	128,422

The imports from Dutch India in 1907 consisted of 72,734 tons of benzine and 4,260 tons of crude oil.

The imports from Roumania consisted of 25,696 tons of illuminating oil and 21,219 tons of benzine.

The following were the quantities of various products exported from Germany during 1907:—

	Tons.
Illuminating oil	695
Lubricating oil	10,552
Residuals	1,627
Benzine (refined)	4,167
Other products	109
Total	17,150

The countries to which oil was exported from Germany were chiefly England, Holland, Belgium, Switzerland, Denmark and Sweden.

Renunciation of Lease.—The Steaua Romana has cancelled its agreement with Mr. Thomas Sorescu for the exploitation of the Vulcanesti property belonging to the latter, on which property the Steaua Romana has drilled two boreholes.

PETROLEUM DEVELOPMENTS IN THE ARGENTINE REPUBLIC.

The *Review of the River Plate* (Buenos Ayres) of the 3rd January states that the Minister of Agriculture has received further news of the oil well at Comodoro Rivadavia. When the oil was struck at a depth of 539 metres it came to within five metres of the surface, and shewed indications of coming over the surface. Two large Australian tanks were to be erected at once, and a large number of barrels has been sent to the well for the storage of the oil.

In connection with the foregoing, it may be noted that Mr. A. C. Ross, H.M. Consul at Buenos Ayres, reports that it is estimated that the output of the well is 33 barrels of 159 litres of oil per day. He states that Comodoro Rivadavia is a small settlement lying near the forty-sixth meridian of south latitude. The site of the well is on national property, and the Government has refused to give any mining licences within 15 miles of it.

ROUMANIAN PETROLEUM EXPORTS DURING DECEMBER.

The following are the figures of the exports of petroleum from Roumania to various countries in December, 1907:—

Destination	Crude, gas oil, distillate, and lub. oil. Tons.	Illuminating oil. Tons.	Benzine. Tons.	Total. Tons.
India	3,285	11,173	—	14,458
England	8,168	—	3,228	11,396
France	416	8,867	—	9,283
Egypt	—	8,032	—	8,032
Turkey	82	2,854	1	2,397
Germany	—	—	946	946
Bulgaria	27	154	48	229
Holland	153	—	—	153
Italy	—	—	143	143
Austria-Hungary	135	—	—	135
Total, Dec., 1907	12,266	31,080	4,366	47,712
" " 1908	5,382	12,581	7,244	25,207

The total exports of various products from Roumania during 1907, compared to the two preceding years were as under:—

	1907. Tons.	1906. Tons.	1905. Tons.
Crude, gas oil, etc.	77,734	53,374	49,515
Illuminating oil and distillate	265,295	196,631	118,134
Benzine	85,264	71,114	46,699
Total	423,293	321,119	214,348

The exports in 1907 have increased against 1906 by more than 30 per cent., and are nearly double those in 1905. Details of the exports in 1907 will be published in the next issue of the REVIEW.

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NOTES FROM ALL QUARTERS.

RUSSIA.

The Baku-Batoum Pipe during 1907 received from the Baku refineries for delivery at Baku 26,959,400 poods of kerosene.

Combination Among Liquid Fuel Users.—At a meeting of the Nijni-Novgorod Exchange Committee it was resolved to ask the sanction of the Government for the holding of a conference of users of liquid fuel in order to consider ways and means to safeguard their common interests.

The Tashkent Railways have entered into contracts for purchasing liquid fuel required by them for the whole of this year. They have contracted altogether for 5,000,000 poods, of which 3,000,000 poods are from the Caspian Society and 2,000,000 poods from Assadulaeff. The Samara Zlatoust Railway will give out its contract for the supply of 8,000,000 poods of liquid fuel by tender in March.

Galician Oil for Poland.—The *Trade and Industry Gazette* publishes the news of the formation in Warsaw of a company for the purpose of importing Galician illuminating oil into Russian Poland. The promoters of this scheme calculate that in spite of the import duty Galician oil will be able to compete with the Russian product, owing to the very heavy cost of delivering the latter product to the Polish market.

Wholesale Thefts of Oil.—Thefts of considerable quantities of oil from the Baku-Batoum pipe line have been discovered. The assistant superintendent of the pipe line, who was ordered to investigate the matter, found that the thefts occurred between the stations of Zazali and Alibashli. After bribing the watchman the thieves put the oil into barrels and sold it at Elisabethpol. In a comparatively short time more than 200,000 poods of oil was stolen in this manner.

The Export Trade.—A report from Batoum, dated January 25th, shews an improvement in the kerosene export trade. The tank steamer "Turbo" took a cargo of 476,000 poods of kerosene to the Far East, where for a time Russian oil had ceased to be exported. Another fairly large cargo, 263,000 poods, was shipped to Venice. This is intended for the case factories established in Italy not long ago. The arrivals of oils from Baku continue irregular. Nobel Bros. are the only firm which has an ample stock of oil, their tanks at Batoum being practically full.

Strikes at Baku.—Strikes have again become prevalent at the Baku oil fields. The directors of the Baku Naphtha Co., in view of the continuance of the strike on their property have given instructions to close the works altogether. A strike has also broken out on several plots of Nobel Bros. at Balakhany. At Nobel's refinery in Black City and on the Bebe-Aibat property quiet prevails. On Assadulaeff's property the men have restarted work on the old terms. Negotiations are in progress with a view to settling certain differences between the owners and crews of the Caspian tank fleet.

To Facilitate Supplies to the Interior.—Some time ago the Baku refiners complained to the Government of the insufficient number of tank waggons available for carrying Baku oils on the Vladicaucasian railways and other lines leading to the interior of Russia, and requested that a certain number of the tank waggons of the Transcaucasian railway shall be transferred to the other lines for that purpose. It is now officially announced that only 120 tank waggons of the Transcaucasian railway are adapted for use on the other lines, and these will be transferred. Instructions have been given to similarly adapt a further 500 tank waggons, which will be transferred when ready.

AMERICA.

The Californian Boom.—The oil boom throughout California continues. In many of the fields—particularly in the Salt Lake territory—the production has lately increased considerably, but owing to the great demand, no oil is going into stocks.

The Union Oil Company.—The annual report of the Union Oil Co. of California has just been issued, and although we have not as yet received a copy we are in a position to announce that the past year has been a very profitable one, the net profits being put at \$2,500,000, an increase of over 100 per cent. upon the profits of the preceding year.

Activity.—The Sunset-Midway field of California is passing through a period of great activity, and almost every operating company is engaged in new work, which will, if successful, considerably extend the limits of the field. The completion of the Standard Co.'s line connecting the field with its main line at Kern River, is doubtless responsible for much of the present activity.

The Salt Lake Field.—The activity now being displayed in the Salt Lake field by operators is receiving remarkable results. One of the most important completions in wells during the past few weeks has been that by the Union Oil Co. in the far western extension of the field. Here the company has brought in a well which is good for over 1,500 barrels daily. At present the daily runs from the field are said to be about 10,000 barrels, and the prices are from 90 cents to one dollar per barrel.

Water Trouble in the Santa Maria Field.—Writing on January 26th, from the Santa Maria field, the special correspondent of the REVIEW states that the water trouble in the field has become a very serious matter, and threatens to considerably destroy production. Quite a large number of the wells have gone to water and the efforts of many producers to combat it have been of little or no avail. At first it was thought that the presence of the trouble was due to badly shutting off the water in some wells, but closer examination suggests that the water comes from below the oil sands.

ROUMANIA.

Increased Transport Facilities.—Following upon the complaints made by Roumanian petroleum refiners about the inadequacy of the transport facilities on the Roumanian State railways, the administration of the railways has asked the sanction of the Government to order abroad 40 additional tank waggons.

An Important Concession.—The Steaua Romana and the Aquila Franco-Romana have secured from the Roumanian Government an exemption of import duty on tin plates imported for making cans for the export of oils. Upon the importation of the tin plates the amount of duty on same will have to be deposited, and when the cans are exported the deposit will be returned to the firms.

The Speranta Company.—At an extraordinary general meeting of shareholders of the Speranta Co. an arrangement was adopted whereby the company purchase from Messrs. Mrazec, Tesseyre and Alimanestianu their right to receive 40 per cent. of the company's profits for a sum of 300,000 francs in fully paid-up shares. At the same meeting a dividend of 8 per cent. was declared for the past year.

Operations at Baicoi-Tintea.—The Steaua-Romana has now restored its famous well No. 6 at Baicoi, which produced the big spouter, and is drilling four more wells in that locality. The company is also drilling two wells at Tzintea. Other firms drilling at Tzintea are the Hollandsch-Rumeensche Co., the Franco-Roumanian Co., Naphtha Co., Jaumotte and Co., Alexander Tonescu, Popovici-Costi, Dinopol, and the Alpha Co.

Discontinuance of Production Statistics.—The *Bursa* announces that the Roumanian Ministry of Domains have decided to discontinue publishing the monthly statistics of petroleum production. No reason is shewn for this step, and it would be difficult to guess at any. The statistics were very valuable as a guide to the true state of the Roumanian industry in general, and of the individual firms in particular, and their discontinuance is much to be regretted.

Important Combination.—Mr. Anton Raky has entered into an agreement with the French firm of Eberhard, Marchena and Co., already interested in the Roumanian petroleum industry, for the purpose of increasing the capital of the Raky Boring Co. (of Roumania). The Raky Co. had a capital of 2,000,000 francs, and will participate to that extent in the re-organised company. The Eberhard Marchena group will come in with 2,500,000 francs. Mr. Raky personally brings in properties of a value of 500,000 francs, whilst 2,000,000 francs will be subscribed for in cash by a certain bank, bringing the total capital of the concern up to 7,000,000 francs.

THE MEXICAN OIL INDUSTRY IN 1907.

Statistics as to oil development in Mexico during the year 1907 are not available, but it is known from evidence at hand that there was a considerable growth of the new industry. The conditions existing in this country do not permit of such a thing as a boom in any particular line of business and this is particularly true of the oil industry. Prospects cannot be carried on here as in the United States. The land is all held in enormous tracts, and in order to obtain a working basis for wild-cattling the operator either has to purchase a big tract of land outright or enter into burdensome leases. So far as known, says the *Oil Investors' Journal*, the lease system as to oil lands is not followed in any part of the country. The oil development and wild-cattling are being done by a few large concerns which own outright the land which they are developing. A number of Americans who have had long experience in the oil fields of different parts of the United States visited Mexico during the past year with the view of engaging in operations if the outlook was favourable. Most of these prospective investors returned home without carrying out their plans. In the first place they found that the secretiveness with which those who are already engaged in the oil producing business prevented them from obtaining important information that they desired as a preliminary to their intended operations in the new field. Next, they encountered the difficulties of obtaining by purchase or lease small tracts of land upon which to put down wild-cat wells, and finally they were discouraged over the multitude of business details that must be observed in this country in order to comply with the federal and state laws.

The Mexican Petroleum Co. is the largest oil producer in Mexico. It is composed of Americans, its principal stockholders residing at Los Angeles, California. The holdings of the company are situated near the port of Tampico, its headquarters being at the new town of Ebano, which the company established. The land which this company owns is said to comprise 1,000,000 acres. Comparatively little of this has been prospected. It bored a number of wells during the year and kept its refinery in constant operation. The output of the company is not publicly known, but it is large, as is shewn by the fact that in addition to keeping its refinery constantly supplied it furnishes 3,000 to 4,000 barrels of oil daily to the Mexican Central Railroad for use as fuel in its locomotives and supplies the crude oil market for a large portion of Mexico. It also turns out a large amount of paving material from its refining plant. The capacities of the wells of this company are estimated all the way from 500 to 1,000 barrels each per day. Some of them flow naturally and others are pumped. The company has been investigating the oil prospects in other parts of the country and it is planning to do a considerable amount of wild-cattling in prospective fields during the current year.

Messrs. S. Pearson and Son, the British contractors who built the extensive port works at Vera Cruz, Coatzacoalcos and Salina Cruz for the Mexican Government,

and who are operating the National Tehuantepec Railroad under a lease for a period of 51 years, have been employed for the past two years in developing oil on the Isthmus of Tehuantepec. This field is situated a few miles west of the Tehuantepec road, the headquarters of operations being at Minatitlan. Messrs. S. Pearson and Son have built a railroad which connects Minatitlan with the National Tehuantepec road. It is stated that the largest oil refinery in Mexico will soon be finished and placed in operation by this firm at Minatitlan. It will cost about \$2,000,000. The firm was very active during the past year in drilling on its various holdings in Vera Cruz and Tabasco. Messrs. Pearson and Son, in addition to their refinery project, are erecting large steel storage tanks at Vera Cruz. It is stated that Messrs. S. Pearson and Son own vast tracts of land in the several localities where they are conducting oil operations and that they are preparing to make the industry one of the largest enterprises of its kind on the continent. The oil field is situated within a few miles of Coatzacoalcos, or Puerto Mexico, as it now called, which is the Atlantic terminus of the National Tehuantepec Railroad, and the firm occupies a favourable physical position for shipping the oil to any part of Mexico, Europe, or the United States. Some of its wells are of the gusher variety. Most of them are capped at this time. They are now supplying the locomotives on the National Tehuantepec Railroad with oil from their own field. When the new fuel was first introduced on this road the oil supply was obtained entirely from Texas.

The owners of the land near Papantla, state of Vera Cruz, upon which oil was discovered a few years ago, have made no effort to develop their holdings owing to the remoteness of the property from railroad transportation facilities. A new railroad is projected to be built from Teziutlan to the port of Nautla, and it will pass close to the oil field. Oil was found in each of the few wells that were bored in the Papantla field.

Oil was recently developed in a well that was bored near Ojinaga, state of Chihuahua, upon land owned by James R. Keane and the Hearst estate. The quantity is said to have been small. Another well is being bored in the same locality.

A Mexican syndicate, which is testing for oil on land situated near Pochutla, a few miles from the Pacific ocean, in the state of Oaxaca, is reported to have been successful in locating pay sand. The new field is close to Port Angel.

BATOU M PETROLEUM SHIPMENTS.

The following were the shipments of petroleum products from Batoum during the week ended January 21st, o.s. (in poods):—

	Illuminating Oil.		Other Products.	
	1907.	1908.	1907.	1908.
To Europe ..	51,000	854,000	91,000	317,000
To the East ..	472,000	703,000	1,000	—
To Russian Ports.	—	111,000	—	—
From 30th Dec. to 21st Jan. :—				
To Europe ..	369,000	1,600,000	666,000	874,000
To the East ..	897,000	1,234,000	1,000	1,000
To Russian Ports	—	214,000	5,000	—

THE OLINDA OIL FIELD OF SOUTHERN CALIFORNIA.

By GEORGE HOMANS ELDRIDGE and RALPH ARNOLD.

The Olinda oil field lies six miles north-east of Fullerton, just within the southern edge of the Puente Hills, near the entrance to Soquel canyon. It is connected with the main line of the Atchison, Topeka and Santa Fe Railway by a branch from Richfields, four miles south. As developed, the field extends along the strike of the measures, N. 65°—70° W., about a mile and a-half, the breadth of the oil-bearing zone varying from one-eighth to one-third of a mile. The field is supplied with water from wells a mile or two out in the valley.

In the immediate vicinity of the productive area the principal features of topography include the main mass of hills, an exterior ridge which borders Telegraph canyon on the south and extends for a mile beyond the entrance to Soquel canyon and an inner valley separating the hills from the exterior ridge. Development has taken place in this valley, and on the lower slope of the main mass of the hills to the north.

The formations involved in the Olinda field embrace the upper and lower Puente shales, the Puente sandstone, and the Fernando conglomerate, sandstone and arenaceous clay. The lower Puente shale, the homologue of that in the Puente oil field, is exposed principally to the east of the developed territory, along Soquel and Carbonne canyons, entering but slightly into the higher portions of the ridges. The Puente sandstone is confined entirely to the main body of the hills, extending north and east from the edge of the field for many miles and forming the cap rock on all the higher portions as far as the Chino divide. The upper shale is not well developed, and it is questionable whether it is present at some places in more than a trace. The Fernando formation constitutes the mass of the ridge south of Telegraph canyon, the point of the ridge between Telegraph and Soquel canyons, the hills west of the entrance to Soquel canyon, and the low bench lands between the latter and Brea ridge, at the west end of the field. It finally enters Brea ridge, and passes westward to the Brea canyon field. It also underlies a considerable portion of the

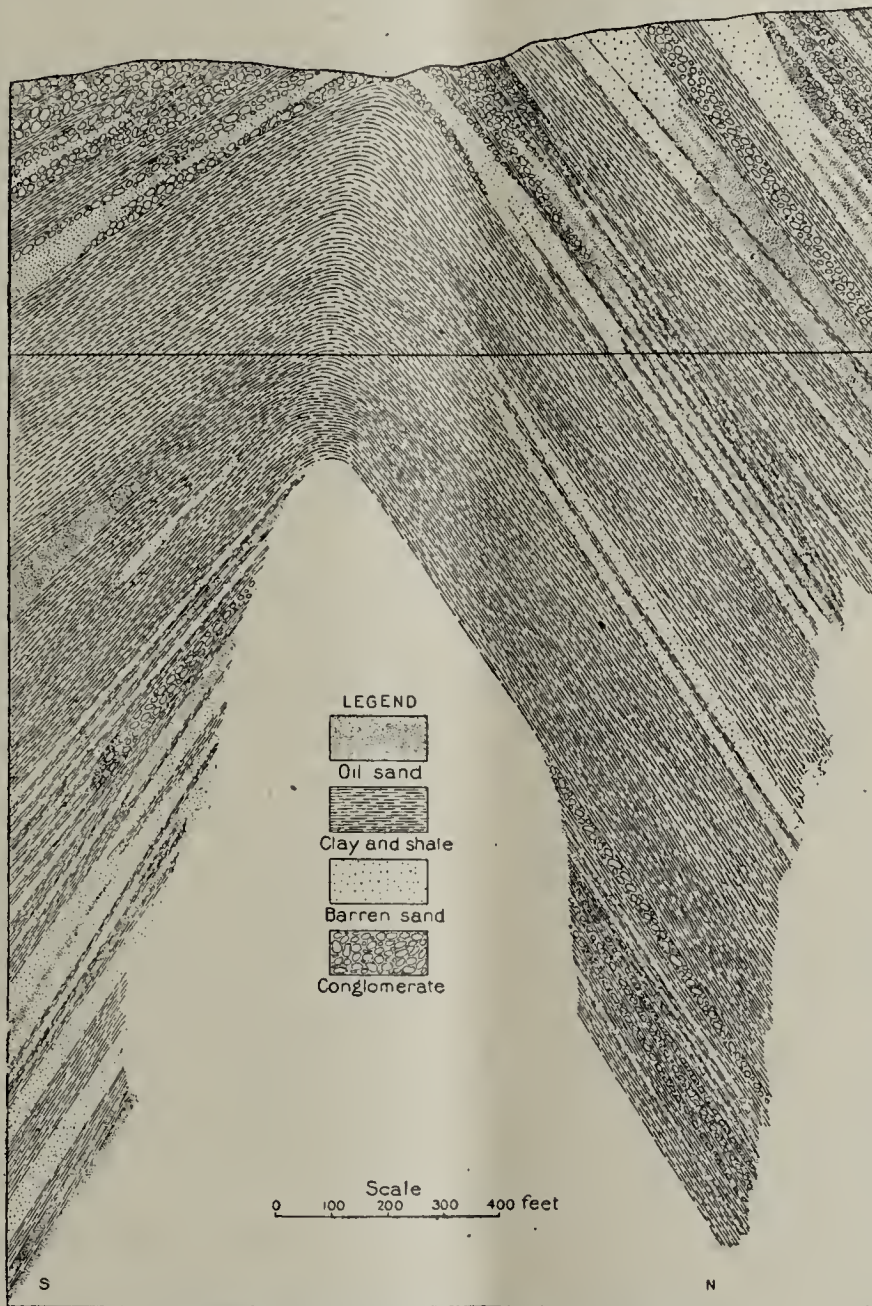
interior valley. These formations all extend to the region of Santa Ana river.

The Olinda oil fields lie on the southern limb of the general anticline of the Puente Hills. The prevailing dip of the strata is therefore to the south-west, but an opposite dip is encountered at many places by reason of subordinate folds developed on the flanks of the principal flexure. The axis of the main fold, which trends N. 65°—70° W., lies somewhat less than a mile north of the oil belt, those of the lesser folds traversing the intervening space.

The northern edge of the oil belt, which is closely coincident with the base of the main body of the hills, is the locus of an extremely sharp fold that has many of the attendant features of a fault.

In immediate proximity to it, also, is a trace of the contact between the Fernando and older formations, but whether this is a plane of faulting or of unconformity it is difficult to say. Perhaps the conditions are the combined results of the two, for the evidence for each at one point or another seems almost conclusive. The formations which are in contact are the Puente sandstone and the shales beneath and above on the north, and the conglomerate, sandstone and clay of the Fernando formation on the south.

The zone of disturbed strata is traceable westward directly into Brea



DETAILED GEOLOGIC SECTION THROUGH OLINDA OIL FIELD

canyon and eastward across the point of the ridge between Soquel and Telegraph canyons well into the hills south of the latter. It is marked in numerous places by heavy seepages of oil, which, however, appear to be from the Fernando rather than from the older beds. Beyond Telegraph canyon the examination was not conducted in detail, but it is a significant fact that in the vicinity of Santa Ana canyon, directly in the line of maximum crushing in the Olinda field, is another area of disturbance found by Mr. Homer Hamlin in a hurried inspection of the geologic conditions there existing. The evidence for a fault in the Olinda field consists in an irregular succession of beds, a zone of crushed strata for 200 or 300 feet on either side of the interformational line, sharp flexures with local downward curve

of the Puente beds on the north of the suggested plane of displacement and upward bend of the Fernando on the south, and the high inclination of both formations. These features also attest to the development of the fracture subsequent to the deposition of the Fernando, although prior to this period faulting might have taken place along a line practically coincident with the later displacement. In fact, there is ample proof in the hills area that the rocks of the Puente had been considerably folded before the Fernando formation was laid down upon them, and it may be that they were faulted as well.

The suggestion of unconformity is borne out by divergence in dip and strike and by the presence in the Fernando of materials unmistakably derived from the older beds. It is, moreover, in harmony with observations throughout a large portion of the coast range. The fact that in the Olinda field, therefore, the Fernando formation lies at one point against the lower shale of the Puente formation, at another against the upper shale, and at still another in contact with the Puente sandstone, may be attributed to unconformity, to faulting or to both. As already mentioned, the writer inclines to the belief that both of these causes have contributed their part in the development of the existing conditions.

The principal features of structure in the Olinda field will now be taken up in somewhat greater detail. In the eastern third of the field, from the vicinity of the gulch, containing Santa Fe wells Nos. 21, 32, 36 and 38, eastward to the Columbia ground and Soquel and Telegraph canyons, there appear to be two divergent lines of structure, the southern line marking the trace of the main fault or of its alternative plane of unconformity between the Fernando and the older beds, maintaining the general trend of N. 65°—70° W., and passing across the lower portion of Telegraph canyon; the northern, a line of severe crushing, extending more directly eastward or even a little north of east and following the gorge of Soquel canyon. The northern line is confined wholly to the Puente formation. The combined effect of faulting and folding, together with the divergence in strike noted, has brought to the surface, north of the divisional line between Puente and Fernando, beds gradually lower in

horizon toward the east, the prevailing dip being 25°—60° N. As the divergence increases, additional crumbles, some of them extremely sharp, appear in the Puente beds.

Immediately north of the northern of the two divergent lines referred to above and close to the northern line of wells is located the axis of the general syncline that is so persistent and conspicuous a feature along the northern border of the Olinda field. Its trend is N. 65° W., and it is especially prominent in the Puente sandstone. This syncline is of especial interest near the centre of sec. 9, where are clustered several wells of the Santa Fe, Fullerton Consolidated, and Columbia Oil Companies. At this point there is considerable uncertainty regarding the stratigraphic horizon, both from the crumbled condition of the beds and from the lack of distinguishing characteristics. The Puente sandstone appears a short distance north of the wells, dipping to the south, but about the wells the strata dip northward and have more the nature of arenaceous, granular and muddy shale, with tracks of the siliceous variety, in one instance faintly organic. On the whole the formation bears considerable resemblance to that underlying the Puente sandstone along the lower slopes of Soquel canyon east of the Columbia wells, and yet it is not unlike certain members of the Fernando. The writer is inclined to place the beds in the Puente and to regard the area as lying within a zone of especial disturbance that is manifest along both the main fracture and its northern branch in all probability in an interfault block. The syncline is traceable in strike from north of east through north to north of west, and in a dip correspondingly variable from north to west and then to south around the east end of the trough, this being especially manifest in the heavier sandstones at the point occupied by the Fullerton wells, which lie close to the synclinal axis or a short distance off on its southern limb. Evidences of the syncline continue eastward to the bottoms of Soquel Creek in a constant repetition of the structural features of the Columbia ground, a westerly dip along the axial line locally as high as 45 degrees being especially noticeable. Beyond Soquel canyon the identity of the syncline is lost.

(To be concluded.)

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The American Oil Market.

New York, Week ended Feb. 1st.

The severity of the weather has occasioned a check on operations in the lower south-west fields, and reports have been rather meagre during the week. Probably the most interesting development, says the *Oil, Paint and Drug Reporter*, has been the bringing in of a well of a gusher type in Bonds Creek district, of Ritchie county, West Virginia, which started at the rate of 20 barrels an hour but later declined to 200 barrels a day. This location shews an extension of the producing formation towards the south-west. This completion contributes materially to the gratifying results that have been accomplished of late in this district. The two leading producers were credited by a recent report with maintaining 400 and 500 barrels respectively, and another is sustaining a steady output of 100 barrels a day. The total number of completions in the high grade fields of West Virginia, Pennsylvania and south-eastern Ohio for the current week was 79, with a new production of 1,167 barrels. A general lull has been experienced in the Lima field of north-western Ohio and Indiana, and the few completions have failed to attract any particular interest. With the resumption of the usual activity in the spring, the stretch of territory from south-western Indiana toward the south-eastern section of Illinois will probably be the scene of a large amount of test work. There has been a marked slump in Illinois operations during the week, completions numbering 59, of which 53 were oil wells, yielding a new production of 4,962 barrels. For the previous week there were recorded 91 completions, with a new production of 5,108 barrels from 71 wells. The runs from the wells for the first 25 days of the month reached an aggregate of 1,900,657 barrels, while the total deliveries for 26 days were but 3,944 barrels. A feature of new work lately inaugurated in Kentucky is the deep drilling in undeveloped districts, but no indications of oil in paying quantities have as yet been disclosed. In the producing fields operations have been pushed with a fair degree of activity, the best result being encountered in lower Wayne county, in a show for a 40-barrel producer. The strike indicates an extension of some importance. Our correspondent in the Mid-Continent field writes that January statistics will probably record a material decrease in operations, especially in the Glenn and shallow sand districts. In the Gulf coast region the most noteworthy result was the completion of a well at Spindle Top, the producing capacity of which was estimated at 300 to 350 barrels a day. Advices from California note several recent completions of the gusher type, the most remarkable being one in the western extension of the Salt Lake field, reported good for 1,600 barrels a day.

REFINED AND PRODUCTS.—The local market for refined presents a fairly active appearance for domestic requirements, but the export movement has moderated, clearances for the week aggregating 10,227,740 gallons, of which 7,740,000 gallons were shipped in bulk, against 11,202,610 gallons (7,125,000 in bulk) during the previous week. There has, however, been more occasion for the chartering of additional steamers, engagements during the week being reported as follows:—130,000 cases for February shipment to Shanghai, option Whampoa; 250,000 cases for February shipment to Shanghai and Chinkiang; 150,000 cases for March shipment to Chefoo, option Chefoo and Newchwang, and 180,000 cases for February shipment to Hong Kong. Nothing of new interest has developed with regard to values, the market ruling firm at lately prevailing quotations. Following the previous announcement of the decline of 1c. in 86 degrees gasoline, a similar reduction has been made in auto naphtha and stove gasoline, bringing them to the basis of 14c. The move is believed to have been prompted by the lightness of the recent demand. The export movement in naphtha has continued within narrow limits during the week, clearances aggregating but 29,350 gallons, against 257,500 gallons reported previously. Residuals have been in better request,

particularly for export, our record of clearances for the week shewing a total of 427,700 gallons.

CLOSING QUOTATIONS

	In cents per gallon.	CRUDE.	
		Week ended Jan. 25. 1908.	Week ended Feb. 1. 1908.
Pennsylvania crude in bbls.	—	—
Pennsylvania crude in bulk	—	—
Residuum, bbls. for export	—	—

CRUDE AT THE WELLS.

The quotations for oil represented by credit balances were:—

		Week ended	
		Feb. 1. 1907.	Feb. 1. 1908.
Pennsylvania .. ..	..	\$1.58	\$1.78
Tiona .. ..	..	1.68	1.78
North Lima .. ..	..	0.90	0.94
South Lima .. ..	..	0.85	0.89
Indiana .. ..	..	0.85	0.89
Illinois, heavy, below 30 deg. ..	..	—	0.60
Kansas and Indian Ter., 32 deg. and above .. ..	..	0.39	0.41
Heavy .. ..	..	—	0.28
Humble, Tex. .. ..	..	—	0.75
Saratoga .. ..	..	—	0.73
Sour Lake, Tex. .. ..	..	—	0.77
Jennings, La. .. ..	..	—	0.72
CANADIAN OIL:			
Petrolia .. ..	..	1.30	1.34
Oil Springs, less pipeage .. ..	..	1.37	1.41

REFINED—FOR EXPORT.

	In cents.	Week ended	
		Feb. 1.	
Barrels, cargo per gal.	..	S.W. 8.75	W.W. @10.75
Philadelphia	8.70	@10.70
Bulk, New York	5.00	@7.00
Bulk, Philadelphia	4.95	@6.95
Cases, New York	10.90	@13.90
Cases, Philadelphia	10.85	@13.85

REFINED IN CASES—110 FIRE TEST.

		Week ended	
		Jan. 25. 1908.	Feb. 1. 1908.
3,000 to 10,000 .. ..	..	11.05	11.05
1,000 to 3,000 .. ..	..	11.10	11.10

REFINED—JOBGING LOTS.

	In barrels, pkgs. included.	Week ended	
		Jan. 25.	Feb. 1.
120 fire test, S.W. .. in barrels	..	12	12
130 fire test, S.W.	12½	12½
150 fire test, W.W.	13½	13½
In bulk from tanks	10	10
300 fire test	13½ @14	13½ @14

NAPHTHA AND GASOLINE.

		Week ended	
		Jan. 25.	Feb. 1.
Naphtha, crude, car. lots, 68 @ 72 deg.	..	15.00	14.00
Gasolene, 86 deg. ... ..	..	24.00	23.00

PENNSYLVANIAN OIL RUNS from Jan. 14th to Jan. 28th were:—Jan. 14th, 270,476; Jan. 15th, 179,035; Jan. 16th, 180,629; Jan. 17th and 18th, 218,570; Jan. 19th, 115,230; Jan. 20th, 102,182; Jan. 22nd, 104,561; Jan. 23rd, 191,346; Jan. 24th and 25th, 398,377; Jan. 26th, 103,598; Jan. 27th, 200,044; and Jan. 28th, 199,452.

THE DELIVERIES OF PENNSYLVANIA OIL from Jan. 15th to Jan. 29th were:—Jan. 15th, 189,780; Jan. 16th, 162,410; Jan. 17th, 183,059; Jan. 18th and 19th, 339,627; Jan. 20th, 186,165; Jan. 21st, 159,890; Jan. 23rd, 178,104; Jan. 24th, 185,268; Jan. 25th and 26th, 302,221; Jan. 27th, 191,941; Jan. 28th, 195,500; Jan. 29th, 166,790.

CLEARANCES FOR THE WEEK.

During the week ended Jan. 31st, and since Jan. 1, the clearances of petroleum, in gallons, from the port of New York, were as follows:—

	Week.	Year.	1907.
Refined	10,227,740	39,115,250	46,861,970
Crude	4,203	4,700	204,270
Naphtha	29,350	372,100	737,140
Residuum	427,700	437,700	6,250

EXPORT STATISTICS.

The total exports from the port of New York and from the United States have been:—

	Gallons.
From New York, week ended Jan. 31st ..	13,641,187
Total from New York, from Jan. 1st, 1908 ..	65,491,701
Same period last year	62,686,898
Increase	2,804,803
From United States, week ended Jan. 31st ..	20,672,783
Total from United States, since Jan. 1st, 1908 ..	119,135,263
Same period last year	113,187,272
Increase	5,947,991

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The "Review" Shipping List.

FEBRUARY 14, 1908.

(The following abbreviations are used in this table:—L. Left; P. Passed; Arr. Arrived; Sp. Spoken; Tr. Trading.)

Vessel.	From.	For.	Latest Date and Position.	Vessel.	From.	For.	Latest Date and Position.
ALCHYMIST	London	Newport	L. Feb. 9	EUPLECTELA	Singapore ..	Europe	L. Gibraltar, Feb. 10/11
ALEMBIC	Shoreham ..	London	Arr. Jan. 20	EXCELSIOR	New York ..	Hamburg ..	In Port, Feb. 11
ALICE ISABELLE..	Sables d'Olonne	Philadelphia	Sp. Jan. 24, 47 N. 24 W.	EZIO	—	—	Coasting Pera
AMERICAN	Puerto	Philadelphia	Arr. Feb. 2	FRANCE MARIE ..	Marseilles ..	Philadelphia	L. Jan. 4
APPALACHEE	Bengkalis ..	San Francisco	Arr. Feb. 8	GEESTEMUNDE ..	Tyne	Philadelphia	L. Feb. 5
APSCHERON	Venice	Trieste	Arr. Feb. 9	GENESSE	Manchester	Galveston ..	P. Eastham, Feb. 6
ARAL	Hamburg ..	Philadelphia	In Tyne, Feb. 11	GEORGIAN PRINCE	Penarth	Philadelphia	L. Feb. 12
ARAS	Philadelphia	Belfast	P. Del. Break., Jan. 29	GOLDMOUTH	Cardiff	Batoum	P. Oitavos, Feb. 10
ARGYLL	—	—	Coasting U.S. (Pacific)	GUTHEIL	New York ..	Stettin	L. Feb. 1
ASHTABULA	San Francisco	Moji	L. Jan. 22	HAINAUT	Alexandria & Bougie	Antwerp	In Port, Feb. 12
ASTRAKHAN	Tyne	Philadelphia	L. Feb. 9	HARRY WADSWORTH	Hull	New Orleans	At Bermuda, Feb. 4
ATLAS	—	—	Coasting U.S. (Pacific)	HELIOS	Hamburg & Tyne	Philadelphia	P. Dunnet Head, Feb. 8
AUGUSTA	Tyne	Philadelphia	L. Jan. 30	HOTHAM NEWTON	Dunkirk	Sunderland ..	In Port, Feb. 12
AUGUST KORFF ..	Manchester	New York ..	Arr. Feb. 11	HOUSATONIC	Barrow	New York ..	Wrecked, Maiden Rock, Jan. 5
AUREOLE	Penarth	New York ..	L. Feb. 8	IMPERIAL	—	—	Tr. on Lakes btn. U.S.A. and Can.
AZOV	—	—	Trading on W.C. of South Amca.	IOANNIS COUTZIS	Dunkirk	Batoum	P. Constant'ple, Feb. 8
BAKU STANDARD	Cardiff	Philadelphia	Arr. Feb. 12	IROQUOIS	New York ..	London	L. Jan. 31
BALAKANI	Port Arthur (Texas)	Hamburg ..	L. Newport News, Feb. 10	J. B. AUG. KESSLER	London	Batoum	In Down, Feb. 8
BATOUM	Sumatra & Thameshaven	Rotterdam ..	Cld. London, Feb. 11	JAMES BRAND	London	Philadelphia	P. Dover, Feb. 2
BAYONNE	Venice	Batoum	P. Dardenelles, Feb. 5	JULES HENRI	Marseilles ..	New York ..	Arr. Jan. 31
BEACON LIGHT ..	Amsterdam ..	Tyne	Arr. Feb. 2	KURA	Philadelphia	Hamburg ..	L. Feb. 7
BEME	Bombay	Rangoon	L. Oct. 22	LA CAMPINE	Philadelphia	Antwerp	In Port, Feb. 12
BLOOMFIELD	Thameshaven	—	P. Prawle Pt., Feb. 11	LA FLANDRE	Antwerp	Philadelphia	P. Scilly, Feb. 10
BORJOM	Alexandria ..	Batoum	L. Theodosia, Feb. 1	LA HESBAYE	Antwerp	Batoum	Off the Wight, Feb. 9
BRILLIANT	Copenhagen	New York ..	L. Tyne, Feb. 5	LA MADELEINE ..	Algiers	Brest	Arr. June 15
BROADMAYNE	Philadelphia	Cette	P. Marcus Hook, Jan. 24	LA VIGUESA	Corunna	Port Arthur (Texas)	L. Jan. 5
BULLMOUTH	Yokohama ..	Palembang ..	L. Feb. 3	LACKAWANNA	Kustendje ..	Kurrachee ..	Arr. Jan. 18
BULYSSES	Rangoon	Europe	P. Perim, Feb. 8	LANSING	Astoria	San Francisco	At Port San Luis, Jan. 26
BURGERMEISTER	Tyne	Philadelphia	L. Feb. 2	LE COQ	Blaye	Philadelphia	L. Pt. de Grave, Jan. 27
PETERSEN	—	—	—	LOUTSCH	Batoum	Odessa	L. Jan. 14
CALCUTTA	Shanghai ..	San Francisco	L. Jan. 7	LUCERNA	Philadelphia	Bergen	P. Marcus Hook, Feb. 2
CAPTAIN A. F. LUCAS	Halifax	New York ..	L. Jan. 18	LUCILINE	Philadelphia	Dunkirk	L. Feb. 10
CARDIUM	Batoum	—	P. Perim, Feb. 12	LUMEN	Bouc	Kustendje ..	L. Algiers, Feb. 6
CATANIA	Pt. San Luis	San Francisco	Arr. Jan. 24	LUX	Rouen	Philadelphia	Sp. Feb. 3, 47 N. 32 W.
CAUCASIAN	Philadelphia	Rotterdam ..	L. Feb. 5	MAKKAVEL	Cette	Novorossisk	P. Dardenelles, Jan. 24
CHARLOIS	Philadelphia	Rotterdam ..	L. Feb. 1	MANHATTAN	Tyne	New Orleans	P. Prawle Pt., Feb. 7
CHESAPEAKE	Tyne	New York ..	P. Dunnet Head, Feb. 10	MANNHEIM	Rotterdam ..	New York ..	P. Scilly, Feb. 5
CHESTER	Antwerp	Batoum	L. Feb. 5	MARGARETHA ..	Kustendje ..	London	Cld. Constant'ple, Feb. 6
CIRCASIAN PRINCE	—	—	Trading on W.C. of South Amca.	MAVERICK	Seattle	San Francisco	Arr. Oct. 6
CLAM	Singapore ..	Port Natal ..	Arr. Jan. 24	METEOR	Vladivostock	Shanghai ..	Arr. Jan. 5
COL. E. L. DRAKE	Astoria	San Francisco	At Port San Luis, Jan. 27	MEXICAN PRINCE	Cardiff	Gibraltar ..	Arr. Feb. 3
COWRIE	Kustendje ..	Bombay	Arr. Feb. 1	MIRA	Newport	Falmouth & Port Arthur	Off Falmouth, Feb. 7
CUYAHOGA	Philadelphia	Liverpool ..	L. Jan. 29	MUREX	Singapore ..	Soesoe	L. Feb. 9
CYMBELINE	Penarth	Port Arthur (Texas)	P. Barry Island, Feb. 6	NARRAGANSETT ..	London	New York ..	P. Dover, Feb. 12
CZAR NICOLAI II.	Hamburg ..	Batoum	P. Sagres, Feb. 7	NERITE	—	—	Tr. in China Seas
DAGHESTAN	Antwerp	Batoum	Off Ushant, Feb. 6	NEW YORK	Southampton	New York ..	S'gld. Browhead, Feb. 9
DAKOTAH	San Francisco	Hong Kong	Arr. Jan. 18	OCEAN	New York ..	Amsterdam ..	L. Jan. 27
DELAWARE	Liverpool ..	Philadelphia	P. O. Hd. Kinsale, Feb. 1	OILFIELD	Rouen	Philadelphia	Arr. Feb. 1
DEUTSCHLAND ..	Bremerhaven	New York ..	Arr. Feb. 10	ORANJE PRINCE ..	Cienfuegos ..	Liverpool ..	In Port, Feb. 12
DIAMANT	Philadelphia	Rotterdam ..	P. Del. Break., Jan. 31	ORIFLAMME	Rouen	Philadelphia	P. Havre, Jan. 29
EDWARD DAWSON	Hull	N. Orleans ..	P. Dover, Feb. 8	OSCEOLA	Tyne	River Plate ..	At Barry, Feb. 6
ELAX	Samboe	Europe	At Suez, Feb. 10				
ELISE MARIE	Tyne	New York ..	L. Feb. 10				
ENERGIE	New York ..	Hamburg ..	L. Feb. 5				
ERIVAN	Batoum	Hamburg ..	In Port, Feb. 11				
ETELKA	Philadelphia	Cette	P. Del. Break, Jan. 21				

Vessel.	From.	For.	Latest Date and Position.	Vessel.	From.	For.	Latest Date and Position.
OTTAWA	London	New Orleans	Arr. Feb. 12	SOYO MARU	Antwerp	San Francisco	Arr. Jan. 6
OURAL	Batoum	Thameshaven	P. Sagres, Feb. 8	SPONDILUS	Freshwater..	Europe	L. Feb. 7
PALEMBANG	Calcutta	Aroe Bay ..	L. Dec. 18	STANDARD	Hamburg ..	New York ..	L. Tyne, Feb. 7
PAULA	Hamburg ..	Tyne	Arr. Feb. 11	STROMBUS	Batoum	Singapore ..	P. Perim, Feb. 3
PECTAN	Port Arthur (Texas)	—	L. Feb. 1	SUN	Manchester	Philadelphia	Arr. Feb. 2
PENNOIL.....	Rotterdam ..	Philadelphia	L. Tyne, Feb. 4	SURAM.....	Batoum	Antwerp	P. Sagres, Feb. 11
PERLAK	Madras	Singapore ..	L. Jan. 17	SUWANEE	Tyne	Philadelphia	Arr. Feb. 7
PHOEBUS	Hamburg ..	New York ..	L. Tyne, Feb. 3	SVIET	Alexandria..	Batoum	Cld. Constant'ple, Jan. 27
PINNA	Yokohama ..	Gaviota	L. Jan. 29	TELENA	Kustendje ..	Madras & Calcutta	At Colombo, Feb. 10
POTOMAC	Avonmouth..	Tyne	Arr. Feb. 10	TEREK.....	Port Arthur (Texas)	Amsterdam..	L. Feb. 5
PROMETHEUS....	Rotterdam..	New York ..	Arr. Jan. 31	TIFLIS	Batoum	Antwerp	P. Finisterre, Feb. 11
PRUDENTIA	Muroran	Singapore ..	L. Jan. 22	TIOGA	London	Galveston ..	Off the Wight, Jan. 23
QUEVILLY.....	Rouen.....	Philadelphia	L. Feb. 7	TONAWANDA	Hong Kong..	San Francisco	At Moji, Jan. 23
RION.....	London	Hamburg ..	L. Feb. 11	TROCAS	Singapore ..	Hong Kong & Swatow	At Hong Kong, Feb. 10
ROCK LIGHT	Kustendje ..	London	L. Algiers, Feb. 11	TURBO.....	Batoum	Hamburg ..	Ashore Haaks, Jan. 7
ROMANY.....	Freshwater..	Europe	At Suez, Feb. 10	TUSCARORA	London	New York ..	Arr. Jan. 31
ROSSIJA	Pensacola ..	Santander ..	P. St. Michael's, Feb. 12	TWINGONE	Rangoon ..	Madras	Arr. Dec. 12
ROTTERDAM	Amsterdam..	New York ..	Arr. Feb. 9	VEDRA.....	Singapore ..	Kobe	L. Jan. 19
RUSSIAN PRINCE	Boston	Wilmington	L. Feb. 1	VILLE DE DIEPPE	Rouen.....	Philadelphia	L. Dec. 22
SALAHADJI	—	—	Tr. Sts. Settlem'ts and Java Seas	VOLUTE	Freshwater..	Melbourne..	Arr. about Feb. 11
SAN CRISTOBAL..	Tyne	Kustendje ..	P. Gibraltar, Feb. 2	WASHINGTON....	New York ..	Hamburg ..	L. Feb. 9
SAN IGNACIO DE LOYOLA	Philadelphia	Gijon	Arr. Jan. 28	WEEHAWKEN	Sunderland..	Philadelphia	Arr. Feb. 9
SAXOLEINE	Tyne	Philadelphia	P. Dunnet Head, Feb. 9	WILLKOMMEN....	New York ..	Swinemunde.	L. Jan. 31
SEMINOLE.....	Muroran....	San Francisco	Arr. Feb. 7	WINNEBAGO	San Francisco	Amoy & Canton	At Hong Kong, Feb. 12
SINGU	—	—	Tr. in East Indies				
SNOWFLAKE.....	Novorossisk	Rouen	L. Feb. 10				

Latest Market Intelligence.

LONDON OIL MARKET.

Supplied by Messrs. Benjamin & Gee, 31, St. Mary Axe, E.C.

February 14th, 1908.

There are no changes to report in the price of Refined Petroleum, prices remaining:—Russian, 6 $\frac{1}{8}$ d. to 6 $\frac{1}{4}$ d.; American, 6 $\frac{3}{4}$ d. to 6 $\frac{7}{8}$ d.; Water White, 7 $\frac{3}{4}$ d. to 7 $\frac{7}{8}$ d.; Roumanian, 6 $\frac{3}{4}$ d.

LUBRICATING OILS

are unchanged as follows:—

American pale, £7 7s. 6d. to £11.

American dark cylinder, from £9 2s. 6d.

American filtered cylinder, from £11 19s. 6d.

No. 1 Russian, £10 5s.

TURPENTINE.

American Turpentine has been fluctuating since we last reported, and at the moment is easier again, it being quoted for Spot 37s., having been up to 38s. 6d., and for forward delivery it is quoted slightly higher.

LIVERPOOL OIL MARKET.

February 14th.

Refined oils are quiet, and sellers quote 6 $\frac{3}{4}$ d. for Russian, Galician or Roumanian; and 7 $\frac{1}{4}$ d. to 8 $\frac{1}{4}$ d. per gallon for American.

PETROLEUM SPIRIT continues at 1s. 0 $\frac{1}{2}$ d. to 1s. 3d. per gallon for American deodorised, according to quality on the spot.

LATEST AMERICAN PRICES.

NEW YORK, February 13th.

Refined, in cases, is steady at 10'90; Standard White, 8'75; Credit balances, 1'78c.

PHILADELPHIA, February 13th.

Standard White is still quoted at 8'70.

RUSSIA.

BAKU, February 8th.

The Baku oil market is uncertain. Crude oil, spot, 26 copecs per pood. Residuals, spot 26 copecs. Kerosene, in ships, delivery February-March, 32 $\frac{1}{2}$ copecs.

BELGIUM.

ANTWERP, February 8th.

The petroleum market is firm. Price of Standard White, spot, 22 francs per 100 kilos.

FRANCE.

PARIS, February 7th.

Illuminating oil is quoted in bulk, in whole tank waggons, 21 francs per hectolitre; spirit, 33'75 francs per hectolitre. Special white oil, in barrels or cans, 29 francs per hectolitre.

GERMANY.

HAMBURG, February 7th.

The kerosene market is quiet. The price of American Standard White is 7'55 marks per 50 kilos; Russian, 7'35 marks.

ROUMANIA.

February 2nd.

Crude oil from different fields, including	Francs.
pipe line charges, per 100 kgs. ...	4'30-4'40
Refined oil, exclusive of taxes ...	6'50-7'00
Benzine, 717-720, including taxes ...	20'00
Benzine, 750-760 ...	14'00
Residuals in tank waggons, at refinery ...	3'80-4'00
Paraffin ...	120'00-125'00

PRICES FOR EXPORT.

Refined oil in tank waggons, per 100 kgs.	6'50-7'00
Benzine, sp. gr. 0'710-0'715, f.o.b. ...	21'00-22'00
" sp. gr. 0'715-0'720 " ...	19'00-20'00
" sp. gr. 0'730-0'740 " ...	14'00-14'50
" sp. gr. 0'745-0'755 " ...	12'00-13'00

INDIA.

BOMBAY, January 26th.

Standard Oil Co., of New York.

Current rates are:—

American, "Snowflake," 150 deg. ..	Rs. 6 4 2
" Chester, 76 deg. ..	4 12 2
" Monkey Brand, 76 deg. ..	4 4 2
" Bulk, 125 deg. (in local made tins) ..	3 13 6
" " 125 deg. (8 Imperial gallons) ..	3 3 6

The Asiatic Petroleum Company, Limited.

Current rates are:—

Burmah oil, in tins, per pair ..	3 8 0
Russian "Rising Sun," bulk, per unit ..	3 6 0
" " tins, per pair ..	4 0 0
" " Anchor" per case ..	4 8 0

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IMPORTS of PETROLEUM into UNITED KINGDOM

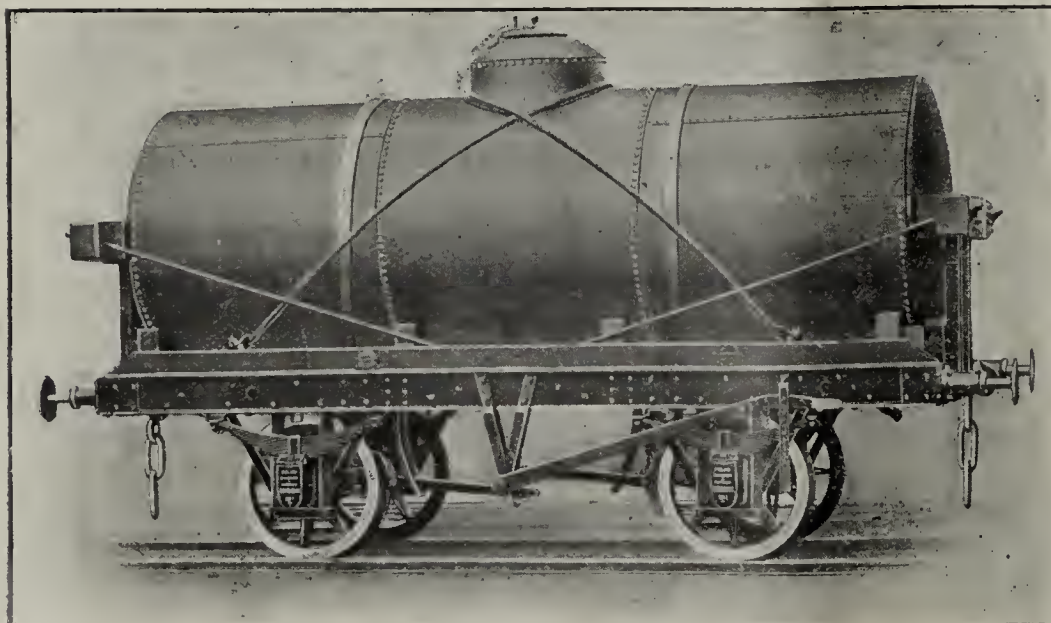
Specially prepared for .
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FOR THE WEEK ENDED 3RD FEBRUARY, 1908—

DATE.	PORT AND IMPORTERS.	DESCRIP- TION.	No. OF GALS.	PORT WHENCE.
Jan. LONDON—				
28	A. Brown and Co. ..	Lub.	2,800	Philadel.
28	Fielder, Hickman and Co...	"	8,000	Hamburg
28	J. Harrison ..	"	130	Antwerp
29	R. Park and Co. ..	"	120	Marseilles
29	Anglo-American Oil Co. ..	"	43,880	Philadel.
29	" (Cymbeline) ..	Gas	1,172,700	"
30	Page, Son and East ..	Lub. Gr.	810	Antwerp
30	Craven and Co. ..	Lub.	60	Hamburg
30	London and India Dock Co.	"	840	"
31	Asiatic Petroleum Co. (Batoum)	Benzine	613,600	Balekpappan
31	British Pet. Co. (Rion) ..	Lamp	328,900	Kustendje
31	" ..	"	495,000	"
31	Bowring Petroleum Co. (J. B. Aug. Kessler)	"	1,656,220	Philadel.
1	Juett and Cain ..	Lub.	4 800	"
3	Union Lighterage Co. ..	M. Colza	620	"
3	" ..	Lub.	56,250	"
3	Scott's Wharf ..	"	8,000	New York
3	Anglo-American Oil Co. (Narragansett)	"	264,260	"
3	" ..	Lamp	2,659,840	"
Jan. LIVERPOOL—				
28	Meade-King, Robinson & Co.	Lub.	20,800	Hamburg
28	Ismay, Imrie and Co. ..	"	750	New York
28	Geo. B. Taylor ..	"	9,600	"
28	Liverpool Storage Co. ..	"	79,760	"
28	W. H. Nott and Co... ..	"	90	"
28	W. Gibson and Sons ..	Lamp	2,050	Boston
28	Anglo-American Oil Co. (Delaware)	"	661,010	New York
28	J. T. Fletcher and Co. ..	Lub.	210	Antwerp
29	C. W. Field ..	"	340	"
29	Vacuum Oil Co. ..	Lub. Gr.	130	Gothenburg
30	Worthington and Boler ..	Lub.	1,000	Philadel.
30	" ..	Refined	4,350	"
31	A. Hopps and Sons.. ..	Lamp	21,000	"
31	" ..	Lub.	12,700	"
31	Jas. Light and Sons ..	"	14,000	"
31	Meade-King, Robinson & Co.	"	40,600	"
31	W. B. Dick and Co. ..	"	11,700	"
31	G. B. Taylor ..	"	64,120	"
31	Bowring Petroleum Co. ..	"	1,480	"
31	Vacuum Oil Co. ..	Lub. Gr.	5,080	"
31	" ..	Lub.	480	Christiania
31	Crew, Levick, and Co. ..	"	2,360	Hamburg
31	Pickfords, Ltd. ..	"	500	"
31	American Line ..	"	360,50	Philadel.
31	Crew, Levick and Co. ..	"	34,930	"
31	" ..	M. Colza	5,160	"
Jan.				
3	Meade-King, Robinson & Co.	Lub.	9,520	Philadel.
3	" ..	"	2,600	Baltimore
3	" ..	"	10,000	"

DATE.	PORT AND IMPORTERS.	DESCRIP- TION.	No. OF GALS.	PORT WHENCE.
Feb.				
3	Vacuum Oil Co. ..	Lub.	23,800	New York
3	Pickfords ..	"	240	Antwerp
3	Penwarden and Jackson ..	"	250	"
9/1	Anglo-American Oil Co. (Sun)	Lamp	112,700	Philadel.
Jan. BRISTOL—				
28	Anglo-Bosphorus Oil Co. ..	Lub.	4,000	Hamburg
28	Ford and Canning ..	"	1,000	New York
28	H. R. James and Sons ..	"	12,060	"
29	Spillers and Bakers.. ..	"	1,000	"
31	W. Smith and Co. ..	"	26,600	"
31	" ..	Lamp	8,000	"
31	H. R. James and Sons ..	M. Colza	6,000	"
31	" ..	Lub.	4,940	"
Feb.				
1	John Hare and Co. ..	"	940	"
1	E. Stock and Sons ..	"	2,000	Hamburg
1	First Anglo-Russian Oil Co.	"	3,100	"
3	Pickford's, Ltd. ..	"	410	"
3	" ..	"	240	Antwerp
3	W. Smith and Co. ..	"	25,400	New York
3	H. R. James and Sons ..	"	6,410	"
3	" ..	M. Colza	3,200	"
3	Anglo-American Oil Co. (Potomac)	Lamp	979,920	Philadel.
3	" ..	Gas	268,380	"
GRIMSBY—				
1	J. Sutcliffe and Son ..	Lub.	400	Antwerp
Jan. HULL—				
28	J. Good and Sons ..	"	120	Abo
28	Wilsons and N.E. Railway Shipping Co.	"	630	Antwerp
28	T. Wilson, Sons and Co. ..	"	2,000	New York
30	W. Gilyott and Co. ..	"	2,240	"
30	Wilsons and N.E. Railway Shipping Co.	"	2,680	Antwerp
30	T. Wilson, Sons and Co. ..	"	6,000	Trieste
31	W. Gilyott and Co... ..	"	2,000	"
31	" ..	"	108,680	New York
31	T. Wilson, Sons and Co. ..	"	10,600	"
31	" ..	"	1,640	Reval
31	Wilsons and N.E. Railway Shipping Co.	"	5,040	Antwerp
31	" ..	"	200	Hamburg
MANCHESTER—				
28	Worthington and Boler ..	"	1,260	Philadel.
28	Lampert and Holt ..	"	1,650	New York
28	Diamond Lubricating Co... ..	"	2,400	"
28	Bramwell, Fern and Co. ..	"	3,030	"
30	Liverpool Storage Co. ..	"	4,400	"
30	Geo. B. Taylor ..	"	177,800	"
30	" ..	"	142,600	Philadel.
30	Meade-King, Robinson & Co.	"	42,320	"
30	" ..	"	36,880	"
30	D. Currie and Co. ..	"	80	Hamburg

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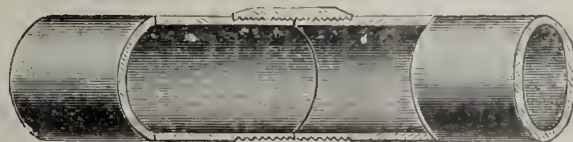
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DATE.	PORT AND IMPORTERS	DESCRIPTION.	NO. OF GALLS.	PORT WHENCE.
Jan.	MIDDLESBRO'—			
30	E. Harris and Co.	.. Lub.	1,560	Antwerp
Feb.	SWANSEA—			
1	Bristol Steam Nav. Co.	.. Lub. Gr.	80	"
1	Burgess and Co.	.. L. Paste	110	Hamburg
Jan.	ABERDEEN—			
31	R. Connon, Reid and Co.	Lamp	1,400	"
	GLASGOW—			
31	Clyde Shipping Co. ..	.. Lub. Gr.	140	Antwerp
Feb.	3 J. and A. Allan ..	.. Lub.	104,440	Philadel.
Jan.	GRANGEMOUTH—			
30	J. Currie and Co. ..	.. L. Paste	240	Hamburg
30	"	.. L. Paste	220	"
30	W. Graham-Yooll and Co...	Lamp	4,800	"
30	"	..	3,200	"
	LEITH—			
29	W. Graham-Yooll and Co...	"	5,230	"
29	J. Currie and Co. ..	.. Lub.	520	"
29	G. Gibson and Co. ..	..	800	Antwerp
31	"	..	4,880	"
31	W. Graham-Yooll and Co...	Lamp	3,050	Hamburg
	BELFAST—			
29	J. C. Pinkerton and Co. ..	Lub.	160	"
31	Anglo-American Oil Co.	Lamp	553,960	New York
	(Aureole)			
	CORK—			
28	Palgrave, Murphy and Co.	L. Paste	140	Hamburg
28	Salvage Association..	.. Creosote	1,880	"
	Total for Week ..	..	11,101,250	

FOR THE WEEK ENDED 10TH FEBRUARY, 1908—

Feb.	LONDON—			
4	Mercantile Lighterage Co...	Lub.	800	New York
4	Fielder, Hickman and Co...	"	24,320	"
4	Produce Brokers' Co. ..	"	4,800	"
5	J. Spurling ..	..	420	"
5	Beck and Pollitzer ..	..	370	"
5	R. Park and Co. ..	.. Lub. Gr.	110	"
5	Anglo-American Oil Co. ..	Lub.	62,920	"
5	"	..	12,400	Philadel.
5	"	.. M. Colza	20,000	"
5	E. J. Walkenshaw ..	.. Lub.	2,000	"
5	London and India Dock Co.	"	240	Hamburg
5	T. H. Lee ..	..	70	"
6	London and India Docks Co.	"	2,720	"
6	Page, Son and East..	..	1,320	Antwerp
6	G. and H. Green ..	.. L. Comp.	4,440	New York
7	Schlieman's Oil Co. ..	.. Lub. Gr.	2,750	Baltimore
7	Homelight Oil Co. (Bloomfield)	Lamp	515,850	Batoum
7	Schenker and Co. ..	.. Lub.	480	Antwerp
7	A. Brown and Co. ..	..	2,000	Hamburg
10	Page, Son and East ..	..	360	Antwerp
10	E. J. Walkinslaw ..	..	2,600	Baltimore
	LIVERPOOL—			
4	Valvoline Oil Co. ..	..	11,690	New York
4	George B. Taylor ..	..	118,240	"
5	Meade-King, Robinson & Co.	..	7,800	Baltimore
6	D. Currie and Co. ..	..	120	Hamburg
7	Meade-King, Robinson & Co.	..	14,500	"
10	"	..	2,000	"
10	Pickford's ..	.. L. Paste	1,000	"
10	Valvoline Oil Co. ..	.. Lub.	3,280	New York

DATE.	PORT AND IMPORTER.	DESCRIPTION.	NO. OF GALLS.	PORT WHENCE.
Feb.	BRISTOL—			
6	Anglo-Bosphorus Oil Co. ..	Lub.	2,000	Hamburg
7	First Anglo-Russian Oil Co.	"	2,540	"
8	E. Stock and Sons..	..	2,000	"
	GOOLE—			
7	Lancs. and Yorks. Railway	"	1,200	Antwerp
	GRIMSBY—			
6	J. Sutcliffe and Son ..	..	1,660	"
6	"	..	400	"
6	"	..	30	Hamburg
	HARWICH—			
6	D. Howard ..	..	160	Antwerp
	HULL—			
6	Wilsons and N.E. Railway Shipping Co.	"	520	"
6	"	"	520	Hamburg
6	"	"	240	"
6	"	"	600	Antwerp
6	Hull & Netherlands S.S. Co.	Tar Oil	5,640	Rotterdam
6	Thos. Wilson, Sons and Co.	Lub.	640	Riga
7	Wilsons and N.E. Railway Shipping Co	"	1,000	Antwerp
7	"	"	760	"
	MANCHESTER—			
4	Liverpool Storage Co. ..	Lamp	2,400	Philadel.
4	"	Lub.	5,600	"
4	Crew, Levick and Co. ..	..	21,390	"
4	"	.. M. Colza	10,100	"
4	C. H. Morton and Sons ..	Lub.	800	"
4	Manchester Liners ..	..	4,030	"
4	J. T. Fletcher and Co. ..	..	660	Antwerp
6	"	"	160	"
6	D. Currie and Co. ..	..	2,880	Hamburg
6	W. Hodgson and Co. ..	..	520	"
6	Schofield and Co. ..	..	2,500	"
7	Pickford's, Ltd. ..	..	700	"
8	Manchester Liners ..	..	10,000	Philadel.
	MIDDLESBRO'—			
7	E. Harris and Co. ..	..	240	Antwerp
	NEWCASTLE—			
8	Tyne-Tees Steamship Co. ..	"	2,640	Hamburg
	SOUTHAMPTON—			
7	White Star Line ..	..	28,000	New York
	SWANSEA—			
7	Burgess and Co. ..	..	80	Hamburg
	DUNDEE—			
6	D. Alexander and Sons ..	Lamp	400	"
	GLASGOW—			
6	Clyde Shipping Co...	.. Lub.	1,280	Antwerp
6	J. and A. Allan ..	..	2,000	Philadel.
10	Anchor Line ..	..	34,560	New York
	GRANGEMOUTH—			
7	J. Currie and Co. ..	..	2,000	Hamburg
7	W. Graham-Yooll and Co...	Lamp	4,400	"
	LEITH—			
7	G. Gibson and Co. ..	.. Lub.	2,400	Antwerp
7	"	..	2,560	"
7	Henderson and McIntosh ..	..	2,680	Philadel.
	DUBLIN—			
6	Anglo-American Oil Co.	Lamp	912,400	New York
	(Aureole)			
	Total for Week	1,896,890	
	Total for the Fortnight	12,998,140	

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The Petroleum Review.

By PAUL DVORKOVITZ.

Vol. XVIII. (New Series.)

FEBRUARY 29TH, 1908. •

No. 419.

THE PETROLEUM REVIEW:

The ANNUAL SUBSCRIPTION for both English and Foreign readers is 26s., including Postage. Single Copies may be had at the offices at 1s.

The Editor would esteem it a favour if readers, when communicating with the various firms advertising in our pages, would mention the "Review."

Contributions upon items of interest are always welcomed from subscribers, but in each case these should be accompanied with the name and address of the sender, not necessarily for publication.

Editorial Notes.

From the latest information from Mexico **English Enterprise in Mexico.** it would appear that we are on the eve of some very interesting developments in that Republic in regard to the oil trade. For some years now, the well-known firm of Messrs. S. Pearson and Son, Ltd., of Westminster, S.W., has been laying the basis for future plans in Mexico, the nature of which is now coming to light. Not only has the firm secured vast areas of oil-bearing land upon which prolific wells have been sunk, but a large refinery has been erected, and a system of quick transportation adopted, which includes the laying of pipe lines, the purchase of tank steamers, and the acquisition of those facilities so necessary for the distribution of petroleum products. We learn that not only have Messrs. Pearson decided to cater for the Mexican home market, but it is their intention to inaugurate an export trade for the many bye-products associated with the output of a petroleum refinery. Though up to the present we have been unable to make any official announcement, we trust that with the return of Sir Weetman Pearson from Mexico, we shall be in a position to publish a lengthy statement upon this most interesting phase of recent oil developments.

The shareholders of the Spies Petroleum **The Spies Petroleum Company.** Co. will rejoice to learn that the company's position has lately been improved by the bringing in of a most productive well—No. 5—upon the company's plots at Grosny. The average production of the company's wells for some time past has been in the neighborhood of 2,000 tons per week, but by the coming into production of the Baskakoff well, this yield has been more than doubled, and the latest reports state that the well still continues to furnish some five or six hundred tons daily. For the past fortnight, the Spies production has been approximately 10,000 tons, which is more than fifty per cent. greater than the output of either the Russian Petroleum or the Baku Russian Co. Whatever may be the opinions held out of the future of the Grosny fields—and these are many and widely diversified—it is

certain that should the new well continue to produce at its present rate, and should the Russian market still maintain its strong position with regard to prices, the shareholders of the Spies Petroleum Co. may justifiably shake hands with themselves at this somewhat unexpected and distinctly favourable turn of events.

From the details which we publish upon **Progress in Japan.** another page of this issue, it will be noticed that the petroleum producing industry in Japan is steadily progressing.

The figures deal only with the production of the Echigo field—the locality responsible for the greater portion of the production—and from them, therefore, it is possible to see the extent recorded in the progress of the petroleum-producing industry from year to year. In round figures last year's returns shew a production of 330,600 tons, as compared with a yield of 283,000 tons in 1906 and 244,000 tons in 1905. This, however, is far from satisfying the demands at home, for Japan is a most staunch believer in the good light of the ancients. The home consumption last year may be taken approximately at 400,000 tons of illuminating oil, and thus it will be seen that even with the continuously increasing home output of crude oil, the country has to largely depend upon imported oils to meet the home demand, the total imports last year being about 250,000 tons.

The Roumanian petroleum industry continues to progress in a manner most remarkable, and the rapid strides forward which were made during 1906 as compared with the previous year have been quite outclassed by the advance of last year. The production for the twelve months for the first time in the history of the Roumanian oil industry reached the million-ton mark, the actual figures being 1,129,097 tons, or an increase over the total yield of 1906 of 27½ per cent. When it is remembered that the country's petroleum production exactly a decade ago was only 110,000 tons, the permanent nature of the progress will be apparent. Simultaneously with the increase in production, the industry has extended in all other directions, possibly the most important branch of which is in the export trade. In our next issue we shall publish a number of details touching upon the export movement, together with comments thereon, and thus it is only necessary to now say that Roumania bids fair to become, in the near future, one of our most productive sources of supply.

Due to some extent to winters' grasp, **January in the American Fields.** the operations in the American fields during January were very much behind those of preceding months, the decline being confined to no particular section. One satisfactory feature in the monthly report is that the output of the newly-completed wells

in Pennsylvania and also in the Buckeye fields shewed some slight gain, yet this increase was overwhelmingly wiped out by the remarkable decrease in Illinois and the districts west of the Mississippi River. During the month, the various fields (excluding those of Texas and California), an average of forty wells were completed every day, while for the preceding month this average was forty-eight. Careful observers must note in these monthly returns the disappointing feature of "dry holes." These seem to be increasing to a very alarming extent in the various fields, and for January approximately 27 per cent. of the one thousand odd wells completed were classed as non-producers, a fact which shews plainly the quality of the area which is now receiving the attention of the driller. At the close of the month activity somewhat increased, and it is the general opinion that the figures for February will shew an advancement in field operations.

BAKU AND ITS PETROLEUM INDUSTRY.

ADDRESS BY DR. P. DVORKOVITZ.

A most interesting lecture was delivered before the members of the Russian section of the Polygot Club at the rooms, 4, Southampton Row, London, W.C., on Thursday evening, by Dr. Paul Dvorkovitz, upon "Baku and its Petroleum Industry."

Mr. F. H. Skrine presided over a large attendance, and in introducing the lecturer to the members said that Dr. Dvorkovitz had such a practical knowledge of the petroleum industry in all parts of the world that it seemed to the speaker that what that gentleman did not know was not worth knowing.

Dr. Dvorkovitz commenced his lecture by remarking that the subject of petroleum was of so fascinating a nature—inasmuch as light meant progress—as to be of direct interest to every person of intelligence. The use of petroleum as a means of light dated back to the distant ages, and this was particularly the case in the Caucasus—the home of the worshippers of the sacred fire. In other countries petroleum had been used for centuries, yet it was only during comparatively recent years—with the drilling of the famous Drake well in America—that the exploitation of oil began to assume any degree of commercial importance and entered upon a rapid development, the result of which was seen in the important position which the industry occupied to-day. Until 1877 very little enterprise was shewn by the Russian people in the development of the great mineral wealth of the Caucasus, but thanks to the persistent efforts of the late Prof. Mendelieff the control of the oil fields was removed from the Government and given to private individuals, with the result that enterprise was aroused and exploitation commenced in almost every direction by private capital. Since that time some tens of millions of tons of oil had been produced at Baku, for to-day almost £50,000,000 was invested in the industry. Considerably over 100 tank steamers were constantly employed transporting products to the interior as well as about a thousand barges, for it had to be remembered that upon the Russian oil industry depended much of the industrial activity in the large manufacturing centres, for the fuel was dependent upon Baku.

Dr. Dvorkovitz then proceeded to shew the profitable nature of which attended the operations of the majority of the firms, particularly mentioning the firm of Messrs. Nobel Bros., whose turnover was over £15,000,000 per annum, and whose interest upon capital, in the shape of dividends was 18 per cent. for the past year.

Unfortunately, however, the Russian nation itself had obtained but little benefit from the vast mineral resources of the Caucasus, for the Government looked upon the petroleum industry in anything but a kindly way. They recognised in it a section of trade from which they might derive large revenues, and that was the policy they had practised all along, the effect of which had been to considerably cripple expansion. The Government received

very heavy royalties from leasing the land, and on the products received, the Russian consumer had to pay a tax of 60 copecs per pood. It was a fact that the Russian illuminating oil could to-day be purchased in the most remote village in England at a price less than that at which it was supplied to the inhabitants of Russia, and inasmuch as light means progress, it was easy to understand why so much ignorance still prevailed in the interior of the Tzar's domains, for the poor peasant population could not even afford to pay the prices for illuminating oil. Their nights were, therefore, largely spent in darkness. Had Russian oil had fair treatment at the hands of the Government, the consumption at home would have been enormous, but it was a fact that England consumed more Russian oil than its 140,000,000 of inhabitants.

Then, too, the Russian export trade had been seriously hampered by the enforcement of exorbitant railway tariffs to Batoum, and it seemed as though the Government did not know where to stop taxation.

The lecturer then proceeded to refer to the sad plight of the various English companies operating in Russia, and mentioned that though the English investor had learned from bitter experience to have little or no confidence in the profitable nature of investments in the Caucasus, fabulous profits had been made and were still being reaped from the exploitation of the prolific territories around Baku.

The lecture, which was illustrated by a number of lantern slides, was greatly appreciated, and at the close a hearty vote of thanks was passed to Dr. Dvorkovitz.

LONDON OIL SHARE MARKET.

FRIDAY, FEBRUARY 28TH, 1908.

The continued stagnation on the Stock Markets extends to all departments, and there is little to report in connection with the Oil Share Group. Unfortunately, where changes occur they are of a downward character, this depreciation in value being especially noticeable in Bakus.

The first alteration from the prices published in our last issue was an advance of 1 per cent. in Californian First Mortgage Debentures, on Monday, the 17th inst. On the following day, Shell Transport Ordinary lost 6d. per share at 44s. 6d. to 45s. 6d., and the Preference were a wider market at 10 to 10½, but the former regained the previous loss on the subsequent Friday. On Monday, the 24th, Californian Oilfields were not quite so good, closing quotation being ⅛ easier at 5⅞-6⅞, Russian Petroleum 5½ per cent. Debentures also falling to the extent of 1 per cent. at 76-79, while on Wednesday the former evinced considerable weakness, losing another ¼ on balance at 5⅞-5⅞.

Dealings in Baku issues are practically nominal, especially in the Ordinary Stock, which are now quoted no better than 6d. to 1s. per share, at which price a fall of 1s. 9d. is registered.

At the End-February Settlement, which commenced on Tuesday, rates of Contango charges for the continuation of Oil Shares were 5 per cent. to 7 per cent., and a comparison of making-up prices discloses only one improvement on the fortnight, viz., that of Spies, which advanced 9d. per share at 8s. 3d. On the other hand Baku Ordinary and Preference lose 1s. and 9d. at 9d. and 1s. 9d. respectively, Californians ⅛, at 5⅞, and Schibaieff Preference a similar amount at 1¼, Shell Transport Ordinary being 1s. easier at 45s. 3d.

No change occurred in either of the following:—Anglo-Russian at 1s., Schibaieff Ordinary at 3s., Russian Ordinary at 3s., and the Preference at 4s.

Latest quotations will be found on page 128.

The Roumanian Petroleum Industry during 1907.

A DETAILED RETROSPECT.

We are indebted to our excellent contemporary the *Moniteur du Petrole Roumain* for the following detailed statistics of the production of crude oil at the Roumanian oil fields in 1907.

The total production in 1907 amounted to 1,129,097 tons, as against 887,091 tons in 1906, an increase of 242,006 tons, or 27½ per cent. This figure represents the quantity of oil actually extracted from the wells, and of this 12 per cent. was used as fuel at the fields.

The progress of the production month by month during 1907 is shewn below :—

	1907. Tons.	1906. Tons.
January	82,122	58,434
February	89,020	55,215
March	98,618	67,604
April	95,387	74,789
May	101,849	78,217
June	93,068	75,252
July	95,312	77,858
August	97,639	75,991
September	96,565	76,556
October	99,451	80,961
November	87,470	81,455
December	91,596	84,759
Total	1,129,097	887,091

The growth of the crude oil production in Roumania since 1897, when it first exceeded 100,000 tons, is shewn below :—

		Production.	
		Quantity. Tons.	Value. Francs.
1897 .. .. .	..	110,000	4,400,000
1898 .. .. .	..	180,000	7,200,000
1899 .. .. .	..	250,000	10,000,000
1900 .. .. .	..	250,000	10,000,000
1901 .. .. .	..	270,000	10,800,000
1902 .. .. .	..	310,000	12,400,000
1903 .. .. .	..	384,302	17,293,635
1904 .. .. .	..	500,561	22,525,245
1905 .. .. .	..	614,870	27,669,155
1906 .. .. .	..	887,091	39,919,095
1907 .. .. .	..	1,129,297	50,818,365

The first recorded crude oil production in Roumania was in 1857, with 275 tons. Since that time the Roumanian oil fields have yielded altogether 5,838,165 tons of oil, of a value of 251,126,575 francs.

The contribution of the separate fields to the total production in 1907, compared to 1906, was as under :—

	1907. Tons.	1906. Tons.	Increase or Decrease.
Prahova District—			
Bustenari	479,454	509,995	— 34,541
Campina-Poiana	230,134	102,148	+ 127,986
Moreni	292,147	162,806	+ 129,349
Baicoi	44,315	45,331	— 1,016
Tintea	15,415	11,094	+ 4,321
Doftanet	—	4,302	— 4,302
Calinet	7,575	3,070	+ 4,505
Pacureti-Matitza	1,145	1,420	— 275
Apostolache	671	2,506	— 1,835
Bordeni-Parsani	4,367	498	+ 3,869
Recea	845	1,347	— 502
Other Fields	1,803	1,672	+ 131
Total for Prahova	1,077,671	846,189	+ 231,482
Dambovitza District—			
Gura-Ocnitza	26,005	13,369	+ 12,636
Colibasi	3,577	3,802	— 225
Glodeni-Badislavoia	2,603	2,795	— 192
Other Fields	129	176	— 47
Total for Dambovitza	32,314	20,142	+ 12,172

	1907. Tons.	1906. Tons.	Increase or Decrease.
Buzeu District—			
Sarata-Monteoru	9,480	11,542	— 2,062
Other Fields	447	138	+ 309
Total for Buzeu	9,927	11,680	— 1,753
Bacau District			
Various Fields.. .. .	9,185	9,080	+ 105
Grand Total	1,129,097	887,091	+ 242,006

It will be observed from the above figures that the bulk of the production continues to come from the Prahova district, which supplied in 1905 95·45 per cent. of the total production, as against 95·39 per cent. in 1906. Nevertheless, during 1907, the attention of some of the leading petroleum firms was also directed to the Dambovitza district, where a considerable number of prospecting boreholes were started. As to the Buzeu district, although the output there declined in 1907, as against 1906, there is a good prospect of considerable development taking place in course of the current year, thanks to some trial borings which are now in progress.

In the case of the Bacau district also, the operations carried out during the past year have resulted in little or no progress being recorded. There are strong hopes, however, that the fairly extensive boring operations which are carried on there by the Steaua Romana, Italo-Roumanian Co. and the Romano-American Co. will yield good results in the near future.

An analysis of the figures of the production of the separate fields shews that the Bustenari field, although still the largest producer among the Roumanian fields, shews a decline in output as against 1906. On the other hand, Moreni and Campina shew very large increases. Baicoi shewed a slight falling off, whilst Tintea has increased its yield. These five fields in the Prahova district have together yielded in 1907 1,061,665 tons of crude oil, or more than 90 per cent. of the total production. The Gura-Ocnitza field, in Dambovitza, thanks to the better results obtained by the International Co., shews an increase of about 100 per cent. In the other fields there are no important changes to record.

The relative importance of the various fields is shewn in the following figures of the percentage contributed by each to the total production in 1907, as compared with the figures for the preceding twelve months :—

	1907. Per Cent.	1906. Per Cent.
Prahova District—		
Bustenari	42·5	58·0
Moreni	26·0	20·0
Campina	20·0	11·5
Other Fields	7·0	5·9
Total for Prahova	95·5	95·4
Dambovitza District	2·8	2·3
Buzeu District	0·9	1·3
Bacau District	0·8	1·0
Total	100·0	100·0

The number of boreholes and hand-dug wells in the

Roumanian oil fields has varied month by month during 1907, as under:—

				Boreholes.	Hand-dug Wells.
January	..	..	..	463	699
February	..	..	..	464	700
March	..	..	..	475	702
April	..	..	..	480	705
May	..	..	..	495	707
June	..	..	..	498	705
July	..	..	..	502	685
August	..	..	..	505	680
September	..	..	..	530	670
October	..	..	..	556	644
November	..	..	..	570	640
December	..	..	..	595	643

Since 1903 the number of boreholes has been steadily progressing, and with this has also grown the production

of crude oil. On the other hand the number of hand-dug wells continue to decline. With the development of the petroleum industry hand-dug wells lose their importance. Gradually the hand-dug wells, when the first oil strata at shallow depth, which they are exploiting, have become exhausted, are either abandoned or used as sites for the starting of boreholes by which the deeper and richer strata are reached.

The state of development of the various Roumanian oil fields and the progress made in this direction during 1907 is shewn in the following figures of the number of wells of various classes at the beginning and end of the year:—

	January 1st, 1907.									December 31st, 1907.								
	Boreholes.			Handwells.			Boreholes.			Boreholes.			Handwells.			Boreholes.		
	Pro- ducing.	In Drilling.	Aban- doned.	Pro- ducing.	In Sinking.	Aban- doned.	Pro- ducing.	In Drilling.	Aban- doned.	Pro- ducing.	In Drilling.	Aban- doned.	Pro- ducing.	In Sinking.	Aban- doned.	Pro- ducing.	In Drilling.	Aban- doned.
Prahova District—																		
Bustenari	296	136	75	..	145	88	235	..	383	151	103	..	118	45	243	..	..	..
Calinet	3	3	1	..	—	1	—	..	8	2	2	..	—	1	—	..	..	..
Campina	55	40	48	..	7	2	117	..	73	41	55	..	11	5	115	..	..	..
Moreni	22	9	27	..	—	—	—	..	37	27	22	..	—	—	—	..	..	..
Baicoi	8	16	7	..	3	2	9	..	11	17	14	..	1	3	7	..	..	..
Tintea	8	4	9	..	1	1	20	..	11	11	12	..	—	3	21	..	..	..
Pacureti-Matitza	2	9	3	..	12	2	7	..	1	1	7	..	13	1	8	..	..	..
Podeni-Noi	—	—	—	..	7	3	13	..	—	—	—	..	6	2	15	..	..	..
Apostlache	2	2	—	..	2	—	88	..	1	5	1	..	2	—	88	..	..	..
Bordeni-Parsani	—	1	3	..	1	1	11	..	2	2	3	..	1	1	11	..	..	..
Poiana-Varbilau	—	—	1	..	1	—	5	..	—	—	1	..	1	—	5	..	..	..
Gura-Drăgăneasa	—	—	—	..	5	1	14	..	—	—	—	..	6	—	15	..	..	..
Recea	1	1	13	..	—	—	—	..	1	1	13	..	—	—	—	..	..	..
Oparitu-Copaceni	—	—	—	..	2	4	1	..	—	—	—	..	2	3	2	..	..	..
Gornetu-Cuib	—	—	—	..	1	1	1	..	—	—	—	..	1	1	1	..	..	..
Chiojdeanca	—	1	—	..	—	—	1	..	—	1	—	..	—	—	1	..	..	..
Aricești	—	—	—	..	1	2	—	..	—	—	—	..	1	2	—	..	..	..
Popești	—	—	—	..	—	—	—	..	1	—	—	..	—	1	4	..	..	..
Total for Prahova	397	222	187	..	188	108	522	..	529	259	233	..	163	68	506	..	..	..
Dambovitza District—																		
Gura-Ocnitza	10	7	6	..	30	11	24	..	11	7	6	..	28	11	24	..	..	..
Other Fields in Dambovitza	4	2	10	..	77	5	74	..	1	1	12	..	73	5	74	..	..	..
Total for Dambovitza	14	9	16	..	107	16	98	..	12	8	18	..	101	16	98	..	..	..
Buzeu District	8	4	11	..	71	15	36	..	—	4	19	..	63	2	57	..	..	..
Bacău District	41	23	41	..	322	27	390	..	54	25	55	..	316	26	416	..	..	..
Total for Roumania	460	258	155	..	688	166	1,046	..	595	296	325	..	643	112	1,077	..	..	..

The production of the leading firms in Roumania in 1907, compared to 1906, was as under (in tons):—

Steaua Romana—	1907.	1906.
Bustenari	126,771	139,778
Campina-Poiana	209,388	82,426
Other Fields	19,495	51,505
Total	355,654	273,709
Regatul Roman Co.	208,588	112,188
Bustenari Co.	129,054	132,822
Romano-American Co.	88,181	46,999
Telega Oil Co.	49,451	55,382
International Co.	42,343	42,116
Trajan Co.	41,267	22,473
C. M. Pleyte	34,892	38,468
Colombia Co.	30,718	28,059
Aquila Franco-Romana	18,833	13,774
Arnheemsche Petroleum Co.	11,232	12,289
Nafta Co. (Grigorescu and Vladescu)	11,140	10,294
Galo-Romana Co.	7,357	7,433
Seculeanu Bros.	18,081	10,888
Stefanescu and Co.	5,527	2,443
Alfa Co.	4,682	—

The proportion in per cent. contributed by each of the large firms in the total production in 1907 and 1906 was as under:—

	1907. Per cent.	1906. Per cent.
Steaua Romana	31.46	30.85
Regatul Roman	18.45	13.75
Bustenari Co.	11.42	14.97
Romano-American Co.	7.81	5.41
Telega Oil Co.	4.38	6.24
International Co.	3.75	4.74

It will be observed from the foregoing figures that the order of participation of the leading firms in the total production slightly changed in 1907 as against 1906. The Steaua-Romana remains the premier producing company in Roumania. The second place was taken in 1907 by the Regatul Roman Co., thus displacing the Bustenari Co., which in 1907 took the third place. The Disconto-Bleichroeder group, through their two companies, controlled in 1907 15.8 per cent. of the total production, as against 21.21 per cent. in 1906.

The detailed figures of the production shew the same tendency as in all progressive industries for the small firms to disappear gradually by absorption by the large companies.

The consumption of various petroleum products in Roumania during 1907 as compared with 1906 was as under:—

	1907. Tons.	1906. Tons.	Increase.
Benzine	673	566	107
Lamp Oil	38,467	35,248	3,224
Lubricating Oils	5,851	5,350	501
Residuals	332,990	237,477	95,522
Total	377,990	277,636	99,354

The only noteworthy fact revealed in the above figures is the very considerable increase in the use of

liquid fuel which in 1907, against 1906, amounted to 95,522 tons, or 40 per cent.

The consumption of liquid fuel in Roumania has been growing rapidly in recent years, as is shewn in the following figures for the last seven years:—

	Tons.		Tons.
1901 ..	66,763	1905 ..	162,243
1902 ..	77,876	1906 ..	237,477
1903 ..	97,098	1907 ..	338,999
1904 ..	119,735		

Towards the end of 1907 the stock of residuals at the refineries was only 51,785 tons, which is less than two months' consumption.

(To be concluded.)

THE GALICIAN PETROLEUM ASSOCIATION.

ANNUAL MEETING.

The annual meeting of the Galician Petroleum Association was held at Boryslaw on February 3rd.

The president, Mr. Von Gorayski, in his opening speech, dwelt upon the necessity of establishing an organisation of crude oil producers with a view to raising the crude oil prices from their present low level. The annual report of the association, a copious abstract of which was published in the last issue of the REVIEW, was read by the secretary, who added the information that, thanks to efforts made by the association, the reduced railway rates for oil intended for fuel purposes came into force on February 1st. The association will now direct its efforts towards extending these reduced rates over the central and east Galician railways.

The report of the auditing committee was then submitted, as well as the estimates for 1908. Mr. W. Wolski was elected vice-president. As members of the council the following were elected, Messrs. Setkowski, Augerman and Lewakowski. Into the auditing committee the following were elected, Messrs. Gassorowski, Gawrouski and Zarouski, member of the Reichsrath. Mr. Malachowski, also member of the Reichsrath, and member of the council of the association, excused his absence by telegraph. Mr. Zarauski, who came specially from Vienna to attend the meeting, assured the association of the goodwill of the Polish Club (Polish political party) towards the Galician petroleum industry.

A committee was elected to consider the question of creating a branch office of the association at Boryslaw, whereupon the meeting ended.

THE TIN PLATE MARKET.

Messrs. Norton, Owen & Co., of 4, Bishopsgate Street Within, London, E.C., report under date February 27th, 1908, as follows:—

The market continues firm, with an upward tendency, and we make prices to-day as below, according to delivery required:—

1C	18 $\frac{3}{4}$ × 14	124 sheets	110 lbs.	12/6 to 12/9 per box.
1C	19 $\frac{1}{2}$ × 14	120 "	110 "	12/6 to 12/9 "
1C	20 × 10	225 "	156 "	17/6 to 17/9 "

F.o.b. Wales. Tin lining and iron hooping extra.

PETROL-AIR AS A DOMESTIC GAS.

In the current issue of the *Illuminating Engineer* a most interesting article is contributed by Mr. W. H. Y. Webber upon the petrol-air gaslight. The author points out that petrol-air gas is available for the purpose of domestic lighting at a very small initial and running cost.

To pipe a building for gas of any kind costs not more than one-fifth the expense of electric wiring; and the petrol-air "gas" generating apparatus is simplicity itself. It can be had in stock sizes ranging from 20 to 100 lights. The smallest size is naturally the dearest proportionately; but it only costs about £2 per light capacity, and the larger sizes run to £1 10s. per light, or less.

The so-called petrol-air "gas" is not gas at all, but merely air very lightly carburetted with petrol vapour. There is in the system the incidental, but very real advantage, that there is sure to be about a country house or institution somebody who is familiar with the handling of petrol for motor-car work so that the simple rules relating to the carburetting of air for lighting are likely to present no strange difficulties. The most remarkable feature of the system is the extremely small proportion of petrol added to the air—not more than 1 $\frac{1}{2}$ per cent. All the different makes of plant in the market adhere to this proportion of 98 $\frac{1}{2}$ per cent. of air to 1 $\frac{1}{2}$ per cent. of petrol vapour. The main thing to make sure of in selecting a plant of the kind is that it will constantly make this particular mixture, and no other.

Every plant comprises the elements of a vessel containing the petrol, the carburetter, the small relief gasholder and governor which ensures the automatic operation of production corresponding to the demand, and the hot-air engine for driving the air blower.

The process is necessarily a power one, since the air must be mechanically driven into the carburetter, and so onward. This is effected by the use of the combustible mixture itself, which is caused to burn under the engine. The process is started by pulling round the fly-wheel for a few revolutions by hand, by which the mixing is commenced. As soon as the engine burner begins to work, the rest goes on *ad lib.* The plant occupies a very small space. Of course the petrol tank wants taking care of, but the working parts of the plant are quite harmless. The "gas" is usually advertised as "non-explosive," which is not quite correct. Any gaseous mixture which will burn is also explosible under favourable conditions. This petrol-air blend, however, is so poor a combustible, that the moment it escapes into the air from a burner, or, say, from a leak in the piping, it becomes so diluted by the surrounding air—drowned, so to speak—that it ceases even to be combustible, and consequently cannot explode. This constitutes its safety. So long, therefore, as the machine cannot make a richer mixture, the system is safe enough. A much richer mixture would not burn properly in the burners; so that any mistake in this direction would be promptly indicated.

The upkeep of the plant is inconsiderable, and the labour cost might totally be neglected.

THE UNION OIL COMPANY OF CALIFORNIA.
ANNUAL REPORT.

In a recent issue of the REVIEW we referred to the fact that the balance sheet and annual report of the Union Oil Co. of California had been issued shewing a net profit for the twelve months of \$2,080,771.

We are now in a position to give other details from the balance sheet which will be of more than ordinary interest to our readers. The capital stock of the company is \$10,000,000, and the net earnings upon issued stock for the year works out at 27.6 per cent. The earnings for the first six months of the year were 15.4 per cent. and for the last six months 39.1 per cent., this latter largely increased percentage being due in part to dividends from auxiliary companies. After paying the year's dividends there remains a sum of \$1,203,207 to be used for the betterment and increase of plant.

Exclusive of the tankage which the company owns for the storage of refined oils they possess steel tankage of the total capacity of 2,204,000 barrels, this being distributed as under:—Santa Barbara, 535,000 barrels; Los Angeles county, 329,000 barrels; Oleum, 327,000 barrels; Panama, 280,000 barrels; Hawaiian Islands, 265,000 barrels; Kern, 105,000 barrels; Portland, 90,000 barrels; Ventura county, 80,000 barrels; Chilie, 70,000 barrels; San Francisco, 42,000 barrels; Seattle, 35,000 barrels; Coalinga, 26,000 barrels, and San Diego, 20,000 barrels.

When to the above figures is added the earthen reservoir of 720,000 barrels which the Union Oil Co. has in the Kern fields it will be seen that the company's total storage is 2,924,000 barrels.

The report expresses regret at the several disappointing delays in securing the use of several of its largest vessels. The fleet of vessels now owned by the company includes seven steamships, with a total capacity of 254,000 barrels, in addition to several barges, tugs, sailing ships, and a couple of launches.

The total number of acres controlled by the company is now 213,354. During the year the company has had a total of 207 wells that have been producing. Of this number 68 are in Santa Barbara county and 94 in the Ventura county, the remainder being in Orange (21), Fresno (8), Kern (14), and Los Angeles (2) counties. The company has no less than 330 miles of pipe line in operation, 107 miles of which is 8-inch line.

AN ECHO OF THE THIRD INTERNATIONAL CONGRESS.

Mr. Guiselin, Secretary of the International Commission elected at Bucarest, and delegated by the French group in order to represent the same at the First International Congress of the Frigorific Industries, has been charged, by the section of miscellaneous industries, to elaborate a report on the application of cold in the paraffin, steerine and margarine industries.

Mr. Guiselin has remitted the said report to Mr. Saladin, Chief Engineer of Etablissements Schneider at Le Creusot, Mr. Saladin being the president of the foresaid section.

In the task undertaken by Mr. Guiselin he has been supported by Messrs. Dydejczyk of Lemberg, Gröling of Vienna, Herzog of the Société Trajan, Hirsch and Porges of Brünn Königsfelder Maxchinen-Fabrik, etc., all of them having communicated to him valuable information about this quasi ignorated industry.

We learn that Mr. Guiselin intends to utilise certain information in order to form a second report, it being a continuation of the first one, and completing the same by a description of the various methods and apparatus used for refining paraffin wax in flakes.

DEATH OF MR. CHARLES STEWART, OF THE UNION OIL COMPANY.

We deeply regret to record the death of Mr. Charles Stewart, late European Manager of the Union Oil Co. of California, the sad event occurring recently in California. When the Union Oil Co. made a bold bid for European trade by the construction of the pipe line across the Isthmus of Panama, Mr. Charles Stewart came to this country as the European manager, and opened offices in London. Owing, principally, to the boom in Californian export, the Union Oil Co.'s output was in such demand that it was found next to impossible at the time to engage in a large trade with this country, and therefore the London office closed, and Mr. Stewart returned to California, where he died a few weeks ago from pneumonia.

During his comparatively short stay in London, Mr. Stewart made a host of friends, for he was a gentleman possessed of striking individuality, and we are sure that his large circle of newly-formed acquaintances, as well as his many old friends, will join with us in sentiments of sincere regret at his untimely death.

CLASSIFIED IMPORTS INTO UNITED KINGDOM UP TO FEBRUARY 24th, 1908.

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IN GALLONS.

COUNTRY.	ILLUMINATING.		LUBRICATING.		RESIDUALS.		GAS OIL. (Solar)		BENZINE.		FUEL OIL.		OTHER DESCRIPTIONS.		TOTALS.	
	Since Feb. 10.	From Jan. 1.	Since Feb. 10.	From Jan. 1.	Since Feb. 10.	From Jan. 1.	Since Feb. 10.	From Jan. 1.	Since Feb. 10.	From Jan. 1.	Since Feb. 10.	From Jan. 1.	Since Feb. 10.	From Jan. 1.	Since Feb. 10.	From Jan. 1.
Austria ...	—	—	—	16,000	8,980	13,180	—	—	—	—	—	—	—	—	8,980	29,180
Belgium ...	—	—	24,800	129,750	—	—	—	—	40	40	—	—	—	—	24,840	129,790
Canada ...	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Dutch India ...	—	—	—	—	—	—	—	—	1,484,450	2,864,130	—	—	—	—	1,484,450	2,864,130
Germany ...	35,060	330,940	37,950	296,260	—	1,440	—	—	—	—	—	—	—	—	—	—
Holland ...	—	—	440	5,230	—	—	—	—	4,840	4,840	—	—	—	—	5,280	24,930
Roumania ...	746,000	2,325,900	—	—	—	—	1,060,800	3,083,150	—	—	—	—	—	—	1,806,800	6,375,130
Russia ...	1,604,420	4,202,910	761,390	768,000	—	—	—	—	—	966,080	—	—	—	—	2,365,810	4,970,910
U.S.A. ...	3,185,320	18,536,910	1,583,360	7,091,740	11,120	11,120	2,195,320	8,169,330	—	370,370	—	—	66,520	490,450	7,041,640	34,669,920
Other Countries	—	—	300	24,220	—	—	—	—	280	280	—	440	—	—	580	24,940
	5,570,800	25,396,660	2,408,240	8,331,200	20,100	25,740	3,256,120	11,252,480	1,489,610	4,205,740	—	440	66,520	507,190	12,811,390	49,719,450

AN IMPROVEMENT IN LIQUID FUEL APPARATUS.

A patent has recently been granted to Messrs. C. H. Mann, of 113, Spencer Place, Leeds, Joseph Clayton, of Oak Hill, Moortown, near Leeds, and J. R. Pickering, of Crestmead, Roundhay, Leeds, for an invention relating to an apparatus for feeding liquid fuel to steam-generator furnaces, and particularly to liquid-fuel apparatus for use in connection with steam-boiler furnaces of motor road vehicles subject to considerable variation of load. Hitherto, the difficulties of burning oil so as to obtain perfect combustion without making smoke have been very great, as every slight change in the quantity of steam the generator is to produce requires a corresponding alteration both in the admission of oil to the burner and in the quantity of air required for perfect combustion; and in driving a motor vehicle on a public highway, it is almost impossible to attend to these important functions as the steering and regulating the speed of the vehicle take practically all the driver's attention, while the difficulties have been further increased in the case of employing an air condenser which condenses all the exhaust steam when running light, but which when the power is increased allows part of the exhaust to be discharged through a blast pipe in the chimney, as this causes a suction draught in the furnace when the power is increased, while when running light no draught to the furnace is provided.

The present invention relates to an improved combination of mechanism forming a liquid-fuel apparatus of simple construction particularly for use in connection with the steam-boiler furnaces of motor road vehicles, whereby the difficulties and disadvantages above referred to are entirely obviated.

In order that the invention may be clearly understood, we will describe the same with reference to the accompanying drawing, which represents, in vertical section, a steam-boiler furnace fitted with a liquid-fuel apparatus constructed in accordance with our invention.

Referring to the drawing, the boiler furnace (1) is provided with a burner of the steam injector type adapted to spray oil on to the solid fuel or pieces of refractory material provided in the interior of the furnace, which burner consists of an injector tube (2) coupled up by a pipe (3) to an oil supply tank (4) and an inner injector tube (5) coupled up by a pipe (6) to a steam superheater (7); but instead of the oil being sprayed in liquid form as is now usual, we convert the

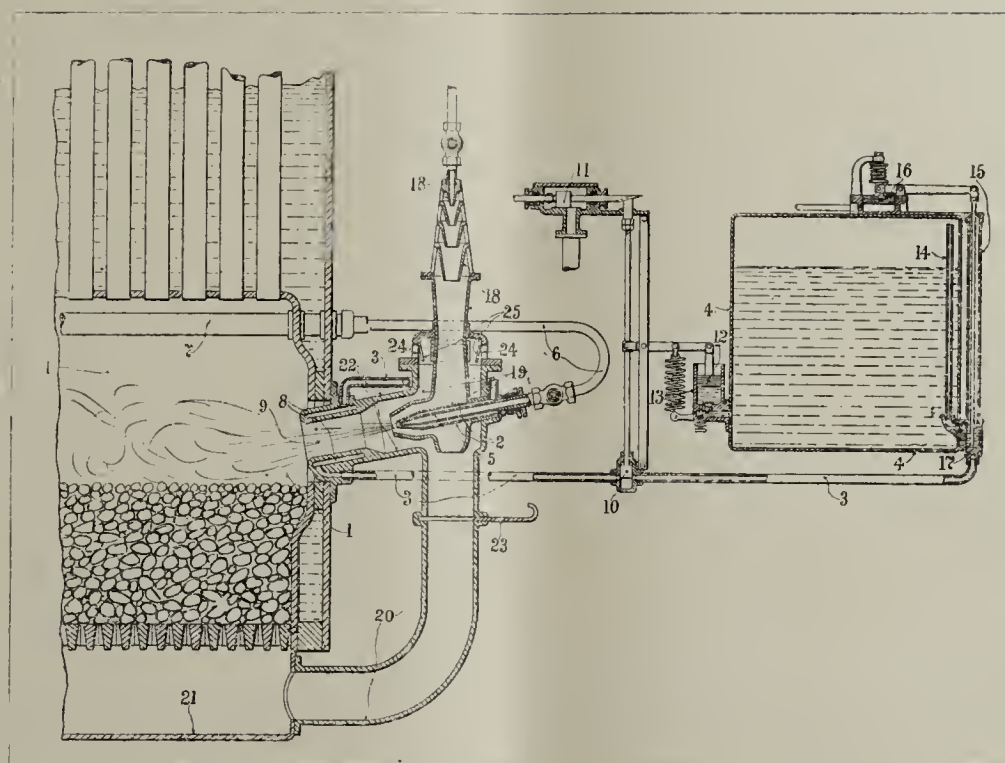
oil into gas before discharging it into the furnace (1). This is accomplished by passing the oil through a jacket (8) provided around the orifice (9) through which the combustible is discharged into the furnace (1) so as to heat the oil, but not sufficiently to vaporise it, and the heated oil is then sprayed by the steam jet (5) into the furnace (1), the steam being highly superheated so as to gasify the oil by mixing with it, whereby any solid residue from the oil is carried forward into the furnace.

The supply of oil to the jacket (8) of the burner is automatically regulated according to the amount of steam the generator has to produce by means of a valve (10), situated in the supply pipe (3) between the oil tank (4) and the burner, through the movement of the throttle valve (11) of the engine, so that as the steam supply to the engine is diminished, a corresponding movement is given to the oil supply valve (10), but this only applies to a diminishing movement of the valve (10)

and not to opening the same, as supposing the throttle-valve (11) was suddenly opened to a considerable extent after being closed or nearly closed, if the oil supply was opened at the same time and to a corresponding extent, there would not be a sufficient draught of air to effect perfect combustion and consequently smoke would be produced owing to the condenser being

comparatively cool and condensing a large proportion of the exhaust steam instead of allowing it to act as a blast in the chimney, therefore we provide in connection with the oil supply valve (10) a timing valve in the form of a spring-operated plunger (12) working in an oil cylinder (13) in connection with the oil tank (4), which timing valve only allows the oil-supply valve (10) to open very gradually; and this movement of the oil-supply valve (10) is also controlled by the position of the throttle valve (11), so that the oil admission is in direct proportion to the steam required.

The oil supply from the tank (4) is also controlled so that the head or pressure of oil in the pipe (3) leading to the burner is always the same independent of the quantity of oil in the tank (4), by making the said tank (4) air-tight and providing a pipe (14) for admitting air to displace the oil consumed, said pipe (14) having its lower extremity connected to a pipe (15) through which the oil flows, so that when the oil is too high it closes the mouth of the pipe (14) and cuts off the air to the tank (4), and thus prevents any further flow of oil



from the tank (4) until the mouth of the air-pipe (14) is again open; while in conjunction with this oil-regulating pipe, we employ a steam-operated piston (16) working against a spring and being provided with a valve (17) adapted to cut off the supply of oil to the tube (3) when the steam in the generator exceeds the working pressure.

In order to regulate the supply of air to the furnace (1) so as to produce perfect combustion, we provide a steam-jet blower (18) of just sufficient capacity to force air into the furnace when the generator is working light, that is when the air-condenser can just condense all the steam produced and there is no effective blast in the chimney to cause suction draught, which blower (18) delivers air into a chamber (19) connected by a pipe (20) leading to a closed ashpit (21) under the furnace grate, which chamber (19) is also formed with a branch (22) leading into the furnace (1) where oil burner is arranged. A valve (23) is arranged in the air-pipe (20), so that the air can be caused to pass into the closed ashpit (21) or into the furnace (1) as required; and the air-chamber (19) surrounding the pipe of the blower (18) is formed with openings (24) to the atmosphere closed by check-valves (25) adapted to prevent the escape of air injected by the blower (18), but when the generator is being worked at a higher rate so that there is sufficient exhaust steam to cause effective suction draught into the chimney, these check valves (25) admit an additional amount of air according to the intensity of the blast in the chimney and the quantity of steam supplied by the generator.

PRODUCTION OF ENGLISH COMPANIES IN RUSSIA.

BAKU RUSSIAN PETROLEUM Co., LTD.—The production for the week ended February 15th was 226,000 poods, or 3,643 tons; and for the week ended February 22nd was 236,000 poods, or 3,804 tons.

RUSSIAN PETROLEUM AND LIQUID FUEL Co., LTD.—The production for the week ended February 16th was 229,000 poods, or 3,692 tons (fall in production on account of two days' Tartar holiday and heavy snow-storm on the 2nd inst., o.s.); and for the week ended February 23rd was 226,000 poods, or 3,644 tons.

SPIES PETROLEUM Co., LTD.—The output for the week ended February 16th was 215,375 poods, or 3,312 tons, of which fountain No. 5, well Baskakoff, produced 91,100 poods, or 1,469 tons. The fountain continues, yesterday's production (February 17th) being 41,330 poods or 666 tons. The production for the week ended February 23rd was 401,885 poods, or 6,482 tons, of which fountain No. 5, well Baskakoff, has given 271,990 poods, or 4,386 tons. The fountain still continues, yesterday's production (February 24th) being 36,545 poods, or 587 tons.

THE EUROPEAN PETROLEUM Co., LTD.—The production for the week ended February 16th was 121,118 poods, or 1,953 tons; and for the week ended February 23rd was 122,256 poods, or 1,971 tons.

LATEST DEVELOPMENTS IN THE MEXICAN OIL TRADE.

DETAILS OF MESSRS. PEARSON'S OPERATIONS.

Some interesting details of the latest developments in connection with the Mexican oil trade are given in a recent issue of the *Mexican Herald*. Our readers will recollect that from time to time we have referred to the operations of Messrs. S. Pearson and Son, Ltd., in the Mexican oil developments, but many details have not hitherto been divulged, inasmuch as it was thought premature to do so.

Matters are, however, now reaching a head, for it is expected, we learn, that Messrs. Pearson are preparing to put their oil on the Mexican markets, through their various agents, in the course of a month or two. It is stated that the firm has already spent some \$10,000,000 in development work, and in the erection of refineries, and in the establishment of agents throughout the Republic. The firm's refinery at Minititlan, Vera Cruz, which is to have a capacity for no less than 5,000 barrels per day, is almost ready for operation. This refinery will be capable of more than supplying the needs of the Mexican republic, and so the firm will at once engage in the export trade.

We also learn that Messrs. Pearson have already 60,000 barrels of oil in tank storage, and additional tanks are being constructed to take care of a larger stock. The wells, which have been proved to be capable of producing large quantities of oil, are scattered throughout the southern part of Mexico and the Isthmus country, but many of these have been capped in order to await developments. In regard to the production which these wells are capable of giving, the figures are secret, but it is said that many of the wells are very prolific.

With reference to transportation facilities, a preliminary order for 25 tank cars has already been placed, and this is shortly to be increased. Messrs. Pearson also own the tank steamer San Cristobal, of 2,500 tons capacity, which was built a year ago, and which now carries oil between America and European ports. It also owns four steel tank barges of 200 tons each, as well as two ocean going tugs, at present stationed either at Vera Cruz or along the Isthmus, and which are to be used for the transportation of oil from one spot to another. Several launches and copper-bottomed barges are also owned for the purposes of transportation work along the Coatzacoalcas river, and additional equipment is being planned in order that the export trade may be extended as soon as possible.

SITUATION WANTED.

LADY desires position as SECRETARY; expert Shorthand-Typist; general knowledge of the oil trade; thorough business experience; capable of conducting correspondence without dictation; age 30; energetic, methodical and accurate; highest references; salary not under £2.—Address "S.W.," c/o PETROLEUM REVIEW, 45, St. Mary Axe, E.C.

RECENT DEVELOPMENTS IN LOUISIANA.

(From Our Own Correspondent.)

Operations in the oil fields of Louisiana are quiet, except at Anse la Butte, 40 miles east of Jennings, where recent developments has caused some excitement, but which is yet in an indeterminate stage. While there are four districts in the State in the producing list, Jennings is the only one defined, and it furnishes all the production—19,000 barrels a day. Welch, 10 miles west of Jennings, has a present production of about 100 barrels a day, 13 wells having been completed and a deep test drilling. Anse la Butte is credited with about 600 barrels a day, six of the wells having been drilled several years ago, the well that started the renewed interest having been completed about two months ago, with an initial flow of 3,000 barrels of fluid, part water, the well now producing about 500 barrels of oil. Caddo, in the extreme north-west corner of the State, has three producing wells, and one being finished with about 350 barrels a day. The well now being completed shews about 500 barrels of fluid, mostly oil, and may be made a good producer. The total production of Louisiana may be given at 20,000 barrels a day. A small refining plant was installed at Welch, but is not in commission, the Southern Pacific Railway taking the oil. The Branch refinery at Jennings has been successfully operated several years. The Gulf and Texas Pipe Line Companies and the Higgins and the Heywood Fuel Oil Companies look after the Jennings production. A pipe line 50 miles long runs *via* Evangeline to the Atchafalaya river to reach water transportation. This line was constructed by Messrs. Bass and Benckenstein, but through sales and transfers of stock, the Guffey Petroleum Co. and the Gulf Refining Co., producing and refining branches of the Gulf Pipe Line Co., now own and control it. By a consolidation of interests between the Guffey Petroleum Co., the Hayward Bros. Oil Corporation and several local interests, the Gulf Co. is a controlling factor at Anse la Butte.

At present there are five wells drilling at Jennings, five rigs up and three locations made. The Noble Oil Co. got a 1,500 barrel well nearly half-a-mile in advance of production, and some interest attaches to the probability of the intervening territory making good. The field is about five miles east of the town, on the Nez Pique bayou, and not visible from the railroad, as most of the other Gulf coast fields. The Jennings production was recently considerably increased by several good wells to the south-east, and the added producing area may make good.

Welch is out on the bald prairie, something like the Morris development in the Creek division of the Oklahoma field, all in a bunch, and seems to be about all in.

Anse la Butte ("anse" for cove, "butte" for hill) is seven miles north by east of Lafayette, a division on the Southern Pacific Railway, and is reached by a motor car over a spur of the railroad. An area of about 25 acres is a salt marsh or depression with a perceptible elevation surrounding it. Several years ago the

Heywoods drilled five or six wells that produced 10 to 40 barrels each. The gusher was drilled on the rim of the marsh to a depth of 1,900 feet, and is said to be producing the oil from clear salt. Another hole was drilled near by to a depth of 1,900 feet, 1,650 feet of which was through solid salt without a break, and stopped in salt. So far all attempts to duplicate the gusher have failed. That well has declined to about 1,000 barrels of fluid, half of which is oil. Nine tests are now under way and five rigs are up. The State geologist has studied the situation and inclines to the idea that the producing formation has a south by west trend around the salt basin, but operators start wherever they can secure a piece of ground. The land measurements and descriptions follow the original French method, the arpent being the token for acre. Surveys and holding are in varying sizes and shapes, under old Spanish grants, and are rather confusing to most people. As high as \$1,000 bonus has been paid for an arpent, a fraction less than an acre, and the average royalty is 25 per cent., going as high as 40 per cent. Anse la Butte, as an oil field, will be made or condemned, in a measure, by the tests now drilling and soon to be completed. A blow-out is one of the features of the field, a fairly preserved piece of wood being one of the things forced out.

At Caddo Lake, 23 miles north of Shreveport, the Richardson interests have a good showing at about 2,200 feet deep, the flow approximating 500 barrels of oil. If the hole can be properly finished, it looks like a good producer. In the Harper test the driller loafed for a minute while pulling out, and the hole is now blowing mud and water, with a trace of oil. While there are 13 rigs up at Caddo, only three or four wells are really drilling, and interest in that development is now at very low ebb. The Richardsons will soon start another test, and if nothing develops will likely suspend further operations. The gasser which blew out two years ago the coming March is still blowing, with apparently undiminished force. Attempts have been made to control the well, but without success. Some time ago the casing blew out, and it keeps "making hole," the excavation being about 150 feet across and deep, filling up with water every three or four days, when the water is evaporated by burning the gas. It is thought the waste of gas will effect the field. A few days ago specials were sent out from Texarkana that the Offenhauser people had completed two good oil wells at Caddo, doing several hundred barrels each, and that contracts had been let for 18 wells. There is not a word of truth in the statement.

Quite a number of wildcat wells are drilling in Louisiana, embracing nearly all of the State. At Alexandria, near the centre of the State, a test is drilling. At Opelousas, 40 miles north of Anse la Butte, two 1,400-foot holes were drilled. At Ruston, 120 miles east of Shreveport, a test is starting, and at Winfield, 40 miles farther east, there is gas in a mineral water

well, with another test arranged for. At Madisonville, on the north side of Lake Ponchartrain, north of New Orleans and east of the Mississippi river, parties will start a well. At Eunice, 40 miles north-west of Anse la Butte, a test is about to start. A test is arranged for at New Iberia, 19 miles south-east of Lafayette, the town made famous by tabasco sauce.

A few years ago John W. Gates, J. J. Mitchell and Randle, of Chicago, organised the American Salt Co. and expended something over a million dollars on Belle Isle, an island of 2,600 acres area, formed by the Gulf and Big and Little Wax bayous, involved in the Atchafalaya river. During the week on the island about 40 holes were drilled, three of them for oil, two of them being about 1,800 feet deep, and many traces of oil were found. One hole would pump about half a barrel a day, carrying 12 pounds of paraffin to the barrel. The oil was produced from rock salt. Two and three-storey brick buildings, a village of good frame houses for employes and all kinds of machinery were installed and left on the island when the company failed because water damaged the salt. The hulls of steamers and barges and a 50,000-barrel iron tank, on the banks of a canal dug through the island, remain. Two years ago the property was sold at sheriff's sale for \$35,000, bought by the New Orleans Mining Corporation, headed by Emil Gottschalk, enterprising New Orleans business men. Captain A. F. Lucas, the father of Spindle Top, secured an oil lease on the island, and recently joined with I. N. Knapp, the well-known oil and gas operator, of Philadelphia, who opened the Chanute oil field. Mr. Knapp holds oil and gas leases on 700,000 acres along the Louisiana coast and has drilled three test holes in Terre Bonne parish, between Houma and Belle Isle. Two of these tests were drilled to a depth of 2,200 feet and one 2,000 feet, encountering several good sand formations that yielded a trace of oil and gas. These wells cost \$18,000 to \$25,000 each. Having a tug, barges, house-boat and plenty of material, Mr. Knapp felt equal to another try for oil. Belle Isle was selected because of its formation. The coast country of south-eastern Texas and southern Louisiana, is a great stretch of level, swampy country, the elevation above sea level being only six to thirty feet as a rule, full of bayous, lakes, swamps, and marshes, here and there a plain rising from 80 to 130 feet above sea level. Nine hundred feet of the surface formation is a sedimentary deposit, with sulphur at Lake Charles, La., and heavy salt formations occasionally. Below the gumbo is found strata of rock in places. Belle Isle rises to a height of 100 feet, an oasis in the network of marshes for miles and miles, and it may be the dome of an oil formation.

Messrs. Nobel Bros.—The *Trade and Industry Gazette* publishes some details from the accounts of Messrs. Nobel Bros. for the financial year 1906. The total revenue was 112,495,306 roubles (against 97,983,010 roubles in 1905); profit, 7,883,889 roubles (4,903,747 roubles); dividend 18 per cent. (against 12 per cent.); debtors, 33,255,059 roubles (24,250,561 roubles); creditors, 52,259,287 roubles (43,719,716 roubles); debenture debt, 17,243,910 roubles (17,817,906 roubles); capital including share capital, reserve, insurance, and other funds 34,411,437 roubles (34,356,572 roubles).

THE GROSNY OIL FIELDS.

DRILLING WORK IN 1907.

The statistics of production at the Grosny oil fields, in December, have not yet been published by the Grosny Petroleum Association, and it is, therefore, impossible yet for us to give the figures of the total Grosny production during 1907. An idea of the conditions and progress made by the industry, however, may be gathered from the figures of the drilling done during the year. In exploitation there were altogether 50 plots; drilling was in progress on 37 plots. The total amount of drilling work done was 53,684 feet, including new and old wells. This figure is high compared to the three preceding years, the aggregate figure for which was only 115,111½ feet. There were altogether 288 boreholes on the fields, of which 90 underwent drilling. The largest part of the remaining wells were baled without any drilling work being done in them; whilst some were entirely inactive or undergoing repairs. In the eastern fields in 44 wells out of 124, on 16 plots out of 18 plots, 40,348 feet were drilled (against 24,723 feet in 59 wells out of 123 on 16 plots out of 19 plots in the preceding three years). In the western district, in 46 wells out of a total of 165 wells, on 21 plots out of 32—27,335 feet were drilled (against 76,398 feet drilled in 101 wells out of a total of 167 on 25 plots out of 31 in the preceding three years).

The proportion of drilling activity in the eastern and western parts of the Grosny field is shewn below in per cent.:—

		Wells in drilling or deepening. Per cent.	Plots on which drilling was done. Per cent.	Amount of drilling. Per cent.
Eastern fields	..	35.5	88.8	49.0
Western fields	..	27.9	65.6	51.0

These figures clearly shew that whilst drilling activity has relaxed in the western fields, it has increased in the eastern fields. The relaxation of activity in the western fields is due chiefly to the exhaustion of some plots and the reduced output of the others, with few exceptions.

Roumanian Competition.—The competition between the Romano-American Co. in the illuminating oil trade on the Roumanian home market continues, and prices of this product in consequence remain low. The Romano-American Co. are continuously opening fresh distributing depôts throughout the country.

The Regatul Roman Co.—A meeting of directors of the Regatul Roman Co. was recently held in Paris, at which Mr. Raký's resignation, as a member of the board, was accepted. Questions relating to the management of the company were discussed, and it was resolved to start a number of new boreholes at Moreni and Pitsgaia. It was further resolved that the company's operations should be concentrated solely on the production of petroleum, and to give up the auxiliary enterprises such as forests, workshops, brickworks, &c.

Batoum Shipments.—The following were the shipments of various petroleum products from Batoum during the week ended 2nd February (0 s.), 1908 (in poods):—

	Illuminating Oil.		Other Products.	
	1907.	1908.	1907.	1908.
To Europe	.. 273,000	204,000	421,000	5,000
To the East	.. 101,000	376,000	—	1,000
To Russian Ports.	—	113,000	4,000	3,000
From 1st Jan. to 2nd Feb.:—				
To Europe	.. 642,000	1,804,000	1,088,000	881,000
To the East	.. 1,762,000	1,712,000	1,000	2,000
To Russian Ports	127,000	439,000	14,000	4,000

NOTES FROM ALL QUARTERS.

RUSSIA.

Strike Ended.—The strike on the property of the Baku Naphtha Co., according to a telegram from Baku, came to an end on the 18th inst., the men returning to work on the old terms.

The Transfer of Messrs. Lianosoff's Business.—The company which has recently been formed in Russia to take over the business of Messrs. G. M. Lianosoff and Sons has now begun business. The first directors are:—G. G. Lianosoff, S. G. Lianosoff, A. G. Lianosoff, and M. S. Saarbekoff. The head office will be in Moscow.

Bebe-Aibat Bay.—It is announced that the Russian Ministry of Agriculture and Domains will shortly invite tenders from persons or firms desirous of taking concessions on plots Nos. 56, 58, 59, 61, and 63 to 105 on the drained portion of Bebe-Aibat Bay, on the condition of a royalty of 35 per cent. of the production to be paid to the Government.

A Cancelled Concession.—The mining office of the Caucasus have declared as cancelled the concession granted to Messrs. Khostoff and Bulatoff on a plot of 27 acres in the locality of Bomut in the Grosny District, for the production of petroleum. The reason is, the failure on the part of the concessionnaires to commence exploitation within the prescribed period.

Exploitation of Private Lands.—Government permission has been granted for the commencement of petroleum production on privately owned lands—(1) to Mr. I. Ter-Akopoff in respect of a portion of plot No. 26 at Bulbuli, in the Baku district, of an area of about 10 acres; and (2) to Mr. M. A. Velieff, in respect of his 27 acres of land, forming part of plot No. 24 at Karadai, in the Baku district.

Oil Thefts.—Thefts of oil from tank waggons standing in Baku station or sidings have lately become very frequent and daring, more particularly on the northern branch line in Black City, on which are the refineries of Lev, Leites, Assadulæff and others, whole waggons of kerosene and mazout having been emptied. People interested in this matter recommend that the railway siding and lines shall be fenced off, and no strangers allowed on them. This will also serve to prevent accidents.

AMERICA.

The Crowley Oil Company.—The successful concern known as the Crowley Oil and Mineral Co. has recently paid its twenty-second dividend of 10 per cent., making the total dividends to date no less a sum than \$440,000.

Oklahoma State Refinery.—A bill has recently been introduced in the Oklahoma legislature providing for the building of a State refinery. Two hundred and ten thousand dollars is to be appropriated for the establishment of the plant—should the bill pass.

Gulf Production during January.—According to the figures in the *Oil Investors' Journal*, the total production of the Gulf oil fields during January was 1,479,950 barrels, or a few hundred barrels less than the figures for December. The daily average production was 47,740 barrels.

Transport to the Gulf Facilitated.—The transport to the Gulf of Mexico has lately been considerably facilitated, for with the recent completion of the Texas Co.'s trunk line to Port Arthur the Mid-Continent fields are now connected with tidewater by four eight-inch lines. The maximum capacity of the four lines is placed at 100,000 barrels per day.

Mid-Continent Stocks.—At the commencement of the present month the total stocks of crude oil in the Mid-Continent fields were over 46,000,000 barrels. Of this quantity, no less than 32,500,000 barrels were held by the Prairie Oil and Gas Co. The total stocks a year ago were 44,000,000 barrels, so that in spite of the great "draw off" during the year and the attempts to minimise production, stocks have increase by over 2,000,000 barrels.

Concerning Mexico.—Mr. Benjamin Andrews, who was formerly associated with operations in the Texas and Louisiana fields, has recently returned to Mexico from Texas. Mr. Andrews is in charge of the development work for Messrs. S. Pearson and Son, Ltd., in Mexico, and it is reported that he has spoken most highly of the capacity of the producing wells drilled upon the various properties belonging to Messrs. Pearson.

Firm Markets.—Owing to the appearance of oil from the Mid-Continent fields—on the Texas markets in large quantities during the last few months of 1907—a large "cut" was made in the price of the Texas product. The decline, however, has now been checked, and advances have recently taken place all round, Humble oil being advanced from 68 to 75 cents per barrel, and Saratoga from 65 to 70 cents at the end of January. Other oils have also been advanced.

ROUMANIA.

Mr. H. O. Schlawe has been appointed general manager of the Concordia Co., the new company with a capital of 25,000,000 francs, in which are amalgamated the Bustenari and Telega companies.

Crude Oil Prices.—The prices of crude oil in Roumania remain firm and the demand good. The production has recently remained stationary, and some few months more will probably elapse before there will be any further increase in production to record, as a result of the drilling of new wells now in progress.

Prices Drop.—In the Roumanian benzine trade a further decline in prices has taken place. This, coupled with the crisis in the lamp oil trade on the home market, has created a difficult position for the Roumanian refiners, which is in direct contrast to the prosperous condition on which the crude oil producers find themselves.

Exemptions.—Among the exemptions from import duty, granted recently under the law for encouragement of industry, are: To the Romano-American Co., for the importation of 200 tank waggons; the Steaua Romana, for 500 tons of tin plates for oil cans; Mr. I. Koster, 150 tons of iron materials for establishing mechanical workshops.

A Prolific Well.—The prolific well of the Regatul Roman Co., at Pitsgaia, has brought up the total daily output of that company to about 1,100 tons, which is above that of the Steaua Romana. In 14 days in January this well yielded 12,000 tons of oil. The yield is frequently interrupted by the choking up of the borehole with sand, which has to be cleared out frequently.

The Concordia.—The formalities for the constitution of the Concordia Co., which is taking over the businesses of the Telega and Bustenari companies, are now completed, and Government authorisation has been granted for the company to commence operations. The first meeting of signatories was held on the 18th inst., when the first board of directors was appointed.

A New Lubricating Oil Refinery.—The new installation for manufacturing lubricating oil which the Vega Co. is building near its refinery in Floesti is now nearly completed and will be ready to commence working regularly in a few weeks. The export of lubricating oils from Roumania is developing steadily, and Roumanian lubricating oils have lately acquired a good reputation on European markets.

The Residual Market.—Residuals are finding a ready market in Roumania, and prices remain stationary. The latest contracts for residuals entered into by the Roumanian State railways were at 34 francs per ton. This price is very low compared with the cost of coal, and was accepted by the refiners in order to encourage the use of liquid fuel. Contracts with private consumers were made at 38-40 francs per ton.

Tintea News.—Mr. I. Koster has started another borehole at Tintea (No. 5) between well No. 1 of the Alpha Co. and Mr. Koster's, No. 1. The borehole, No. 2, has had to be abandoned; the casing having collapsed beyond repair. The drilling rig of that well was removed to another site. The well of the Montana Co., at Tintea, has struck a stratum of a heavy crude oil of 0.893 gravity, with a daily output of three tons.

Wanted, a Quotation!—The Deutsche Bank, with the other German banks interested in the Steaua Romana, have applied to the Berlin Stock Exchange for a quotation of the latest issue of debentures of that company of a nominal value of 3,250,000 marks, redeemable at 105 per cent. The shares of the Steaua Romana are now quoted on the Berlin Exchange at 126.75 per cent., and the 5 per cent. debentures at 101 per cent.

ENGLISH COMPANIES.

SCOTCH COMPANIES

Supplied by Messrs. MACLEAN AND HENDERSON, STIRLING.

Company.	Capital Paid Up.	Value of Share.	Latest Prices.
Broxburn Oil Co., Ltd., Ord. 17/- pd	£235,000	£1	£2 3s. od.
Do. 6% Cum. Pref. ..	£100,000	£10	£12 7s. 6d.
Burmah Oil, Ord.	£1,100,000	£1	£3 15s. 6d.
Do. Pref.	£250,000	£1	£1 6s. 1½d.
Dalmeny Oil Co., Ord. (7 paid) ..	£37,800	£8 10s.	£5 10s. od.
Do. 5% Pref. ..	£18,900	£7	£4 13s. od.
Oakbank Oil Co., Ltd, Ord. (17s. paid)	£170,000	£1	£1 12s. od.
Pumphreston Min. Oil Co., Ltd., Ord. (17s. paid)	£110,500	17s.	£12 17s. 6d.
Do. 6% Cum. Pref.	£100,000	£10	£13 5s. od.
Tarbrax Oil Co., Ltd. Ord. (£1 pd.)	£38,350	£1	£2 19s. 6d.
Do. 6% Cum. Pref.	£35,000	£1	£1 3s. od.
Young's Paraffin Co., Ltd., Ord. ..	£452,808	£4	£3 14s. od.
Do "B" Deb...	£150,000	£100	£152 10s od

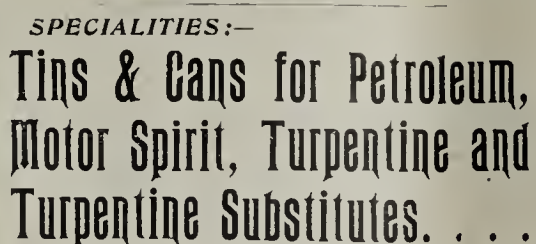
DUTCH COMPANIES.

RUSSIAN COMPANIES.

Company	Nom. Value in Roubles.	Quotations on Feb. 24th.	
		Lowest Roubles.	Highest Roubles.
Baku Naphtha Co.	100	547	549
Balakhany Naphtha Co.	250	—	—
Caspian Society	1,000	4,125	4,150
Mazout Co.	250	—	—
Melikoff, A. C.	250	—	—
Mirzoeff Bros.	250	—	—
Naftalan Co.	250	—	—
Naphtha Co. " Kavkas "	250	—	—
Naphtha Trading Co., A. I. Manta- cheff & Co.	250	150	151
Neft Co.	250	—	—
Nobel Bros.	5,000	11,100	11,200
" "	250	—	—
Rops and Co. V... .. .	250	—	—
Russian Naphtha Co.	250	125	—
Society Mazout	250	—	—
Ter-Akopoff Co.	250	—	—
Tumaieff & Co., J. G.	250	—	—
Volga-Caspian Naphtha and Trading Co	250	—	—
" " " (Second Issue)	250	—	—

Company.	Latest Quotations (per cent.)	Florins
Arnhemsche Petroleum Mij.	—	1,000
Aurora " " (Deb. 5%)	87 $\frac{3}{4}$	—
Campina Poiana Mij.	—	—
Dordtsche Petroleum Mij. (Pref.)	129	50
" " " (Deb. 4 $\frac{1}{2}$ %)	101 $\frac{1}{4}$	1,000
Gaboes " " "	3	—
Holl. Rumeensche Petroleum Mij.	15 $\frac{5}{8}$	1,000
Int. Rum. Pet. Mij.	78	500
Java Petroleum Mij. (Ord.)	—	1,000
" " " (Pref.)	9 $\frac{3}{4}$	—
Koninklyke Nederl. Pet. Mij. Shares	277	250-1,000
" " Share certificates	277	1,000
Mœara Enim Petroleum Mij.	139	100
" " " 1-1,000 Oblig. 5	—	250-1,000
" Moesi Ilir " Petroleum Mij.	—	—
Nederl.-Rumeensche Petroleum Mij.	3 $\frac{3}{4}$	—
Nieuwe Ned. Petroleum Mij. And.	—	1,000
Oliebronnen in Hannover Mij.	52	—
" " " (Deb. 5 %)	—	—
Panolan Maatschappij Cert.	282 $\frac{1}{2}$	—
Perlak Petrol. Mij. (6% cum. pr. A.)	129 $\frac{5}{8}$	1,000
" " " (Common)	—	—
Sumatra-Palembang Petroleum Mij	91 $\frac{1}{2}$	500
Tarakan Petrol Mij.	28	—
Zuid Perlak Petrol. Mij. (Pref.)	85 $\frac{1}{2}$	—

Established 1809.



Patents—Nos. 6905 and 9671.

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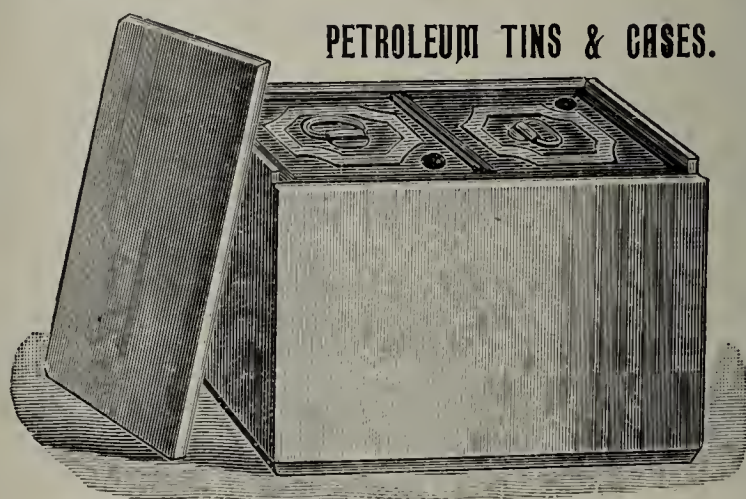
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THE PETROLEUM REVIEW,

45, St. Mary Axe, LONDON, E.C.

American Office: 150, Nassau Street, New York.

SATURDAY, FEBRUARY 29, 1908.

WHAT RUSSIA LACKS.

WE have upon more than one occasion dwelt at length with the question of Russia's export petroleum trade, and by making comparisons based upon statistics which clearly and most convincingly shewed the primary reason for the non-expansion of Russia's foreign trade in petroleum products, that, at first sight, it would appear to be somewhat labouring the point to refer to the matter again. The foreign editor, however, of our excellent contemporary—the *Neftiannoie Dielo*—a gentleman who occupies one of the leading positions in the petroleum trade of England, and whose knowledge upon this subject is of great value, has recently published a

number of detailed statistics dealing with this question. The subject, therefore, is now clothed with added interest, and we hope that these recently-published statistics will not only arouse keen attention throughout Russian oil circles, but go not a little way in proving to the Government—if further proof were needed—the foolishness of its policy in crippling the export movement of Russian oils.

By way of illustration of the argument which we have repeatedly advanced, as to the reason for the waning importance of Russia's petroleum export trade, which argument is now corroborated, the following brief tabular statement of export prices of American and Russian oil, in copecs per pood, will be useful:—

				American.	Russian.	Difference.
1898	..	..	..	36 $\frac{1}{2}$	33	— 3 $\frac{1}{2}$
1899	..	..	..	54	46	— 12
1900	..	..	..	59	50	— 9
1901	..	..	..	49	31	— 18
1902	..	..	..	48	28	— 20
1903	..	..	..	61	36	— 25
1904	..	..	..	56	47	— 9
1905	..	..	..	46	43	— 3
1906	..	..	..	48	53	+ 5
1907	..	..	..	51 $\frac{1}{2}$	56	+ 4 $\frac{1}{2}$

The petroleum exports during the past ten years from America and Russia have been as under:—

			American Exports.	Russian Exports.
			Poods.	Poods.
1898	..	..	143,600,000	51,000,000
1899	..	..	135,600,000	56,000,000
1900	..	..	139,400,000	50,800,000
1901	..	..	156,100,000	67,000,000
1902	..	..	146,900,000	68,000,000
1903	..	..	130,500,000	69,000,000
1904	..	..	143,600,000	62,000,000
1905	..	..	166,300,000	28,000,000
1906	..	..	164,700,000	20,000,000
1907	..	..	170,900,000	25,000,000

An analysis of the above tables will conclusively shew that whereas in the years 1898, 1899, and 1900, when the difference in export prices between American and Russian oils was small, it was with great difficulty that the export trade maintained its position, for during those years, the export of Russian oils was only 51,000,000 poods, 56,000,000 poods and 51,000,000 poods respectively. During the following three years, however, when the balance of export prices in favour of the Russian product were very great—for during these three years Russian prices stood on the average 22 copecs per pood below those for American oils—we find that the export trade enormously increased, and almost 70,000,000 poods were exported annually.

With that desire, however, to always do that which is diametrically opposed to the best interests, the Russian Government saw fit at this time to step in and exact another contribution from the petroleum trade by increasing the rates for freight from Baku to Batoum from 16 to 19 copecs per pood. But the Government did not count the cost, nor did they stop to enquire into or profit by the lesson of experience. They ignored the fact that an increased freight meant placing the Russian oil upon foreign markets at a great disadvantage, and they forgot that the output of the American fields was increasing by such an extent that the American producers and refiners could afford to bring their prices down to the level of the Russian product, and thus cut the ground from under the feet of their foreign competitor. The tables clearly shew what has occurred during the past two years. For this period the export price of Russian oil has been almost five copecs per pood in excess of American oil, and the inevitable result has been, as predicted in the REVIEW several years ago. The export of Russian oil has fallen to a dangerously low ebb indeed, for the average for the past two years has been under 23,000,000 poods per annum.

It was in January, 1904, that Dr. Dvorkovitz paid a special visit to the Assistant Minister of Finance at St. Petersburg, and presented a petition which prayed that the Baku-Batoum rates should not be increased, otherwise the whole export trade of Russian petroleum products would be in jeopardy. But the Russian Government was ever blind to its own interests, and the result of the short-sighted policy of bringing about an enhanced freight rate, we see to-day in the crippled condition of the Russian petroleum export trade.

Certain critics may claim that the decline in the country's export trade is due to another factor—the revolutionary movement—which has caused such unrest throughout the Baku oil fields for the past several years. We do not close our eyes to the injury which the unfortunate strikes, etc., have had upon the industry, but to say that these are responsible, even to a serious extent, for the rapid falling away of the export trade, would be to close one's eyes to the naked truth. The simple reason is that one of the largest firms who have in the past dealt exclusively with the distribution of Russian oil upon the English and Continental markets have felt that their interests would be best served by looking upon their vast distributing organisation from the point of view of a merchant, and buying in the cheapest market, and so to-day we see this influential distributing firm buying its oils in either Roumania, Texas, or Pennsylvania, in fact, just where it can find a market cheaper than that in Russia.

The attitude which the Russian Government has taken up is, without doubt, going a long way to strangle the efforts of a great many enterprising firms to increase the distribution of Russian oil in the foreign markets. Somehow it would appear that Governments frequently have that unhappy knack of doing the very thing that makes for destroying a flourishing branch of commerce. We saw it in America, where the Government very energetically attempted to put a rope round the neck of the petroleum industry. Fortunately, their efforts were unsuccessful, for the transportation facilities were in the hands of private enterprise, whereas in Russia these necessary methods for transportation belong to the Government. To the most casual observer of the movement of prices of crude oil, it is easy to draw the conclusion that, however harmful the so-called private monopolies may be alleged to be, their evils are overwhelmingly lost when compared to the monopoly of a Government, which apparently neither cares nor thinks of one of its most promising branches of export trade. It is this necessary care and foresight which Russia lacks.

THE HOMELIGHT OIL COMPANY, LIMITED.

STAFF ADVANCEMENTS.

The sudden decease of Mr. J. B. McClurg, the general manager of the Homelight Oil Co., Ltd., to which sad event we referred in the last issue of the REVIEW, has necessitated several changes in the *personnel* of the company's staff both in London and the provinces. The most important of these is the appointment of the new general manager, which position has been offered to and accepted by Mr. Geo. H. Watson, who formerly had command of the Manchester branch. Mr. Watson comes to London with the highest of credentials, and his excellent record of energetic and successful work in Cottonopolis is bound to be repeated in his new sphere of labour. Mr. Watson's position at Manchester has been taken over by Mr. Bates, who has previously been the Hull representative of the Homelight Co., and to this vacancy Mr. Cartali, formerly superintendent at Liverpool, has been appointed.

MISCELLANEA.

BAKU PRODUCTION DURING JANUARY.

The total production of crude oil at the Baku oil fields in January amounted to 38,358,822 poods. Spouters yielded in January: at Bebe-Aibat 3,025,74 poods and at Saboontchi 416,000 poods.

The production of the leading firms during the month was as under:—

	Poods.
Nobel Bros.	5,700,000
Caspian and Black Sea Society	2,900,000
Mantascheff and Co.	2,300,000
Caspian Society.. .. .	2,100,000
Zoubaloff	2,000,000
Mirzoeff Bros.	1,300,000
Aramazd Co.	1,200,000
Russian Naphtha Co.	1,100,000
Russian Petroleum and Liquid Fuel Co., Ltd.	1,100,000
Baku Russian Petroleum Co., Ltd.	1,000,000
Bibi-Eybat Petroleum Co., Ltd.	900,000
Pitoeff and Co.	900,000
Moscow-Caucasian Co.	900,000
Schibaieff Petroleum Co., Ltd.	900,000
Neft Co.	800,000
Naftalan Co.	800,000
Nagieff	700,000
Shikhovo Co.	600,000
Tchernoneboff	500,000
Ter-Akopoff	500,000
Tiflis Co. (Bebe-Aibat).. .. .	500,000

THE ANGLO-MEXICAN OILFIELDS, LIMITED.

The Secretary states:—"Cable advice has been received of the commencement of drilling on the Guadalupe estate thus securing the company's rights over that property referred to in the prospectus. Mr. Nicklos writes that the 'shows' on the brook Chapopote are much better than they were when he reported upon the property last February, and that in the course of the preliminary work he has encountered other oil shows. It is anticipated that drilling on the San Carlos estate will be begun at an early date."

MR. J. D. ARCHBOLD UPON THE STANDARD OIL COMPANY.

A FEW POINTED REMARKS.

Mr. John D. Archbold, speaking recently at a banquet in New York, made a few pointed remarks regarding the Standard Oil Co., of which immense organisation he is a vice-president. In apologising for the absence of Mr. J. D. Rockefeller he said that no man living valued the good opinion of his fellow-men more highly than he, and that was peculiarly true in regard to the people of Ohio—the State with which his life had been so closely identified in the business and personal way. When Mr. Rockefeller's career was closed and was judged dispassionately, it would be written of him that he was not only one of the greatest business geniuses, but one of the greatest philanthropists of his day. The business of the Standard Oil Co., to which he had given his life,

and with which the speaker was proud to be connected, had been and was one of their country's most valuable business organisations. It had been a blessing, not a bane to the country. The writer or speaker, who attributed its success to railroad rebates or unfair business methods, did so either through malice or ignorance. It gave steady and remunerative employment to about 65,000 men; had between 5,000 and 6,000 shareholders, and furnished to the world one of the prime necessities of life at a minimum cost. No business organisation on earth had been so unfairly, so maliciously criticised, but when its true history was written, it would be shewn that it had followed throughout in its relations to the public, to the State and towards its competitors, a course consistent with the best business ethics.

KEROSENE IMPORTS INTO YOKOHAMA DURING 1907.

The imports of kerosene into Yokohama during 1907 amounted to 20,743,730 gallons, and were valued at 4,188,655 yen. During December 2,547,252 gallons of kerosene were imported, and these were valued at 518,539 yen, as against an import of 2,759,878 gallons for December, 1906, valued at 594,825 yen.

THE PETROLEUM INDUSTRY OF JAPAN.

One of our readers in Japan sends us the following figures concerning the petroleum industry in that country:—

In 1907, the oil production of Echigo, which is the main oil producing province of Japan, was 1,755,464 koku (=1.136 barrel of 42 gallons). This is in excess of 253,901 and 458,982 koku respectively over the same of 1906 and 1905. The detailed statement by fields is as under:—

Field.	1905.	1906.	1907.
Higashiyama.. ..	273,844	304,847	342,042
Nishiyama	271,495	294,277	360,115
Niitsu	634,704	808,655	970,556
Kubiki.. ..	97,075	76,578	63,572
Amaze.. ..	5,220	7,262	12,447
Ojiya	14,180	9,964	6,732
Total	1,296,482	1,501,563	1,755,464

The consumption of kerosene in Japan during the past decade was as follows (in koku = 1.136 barrel of 42 gallons):—

Year.	Domestic.	Imported.	Total.
1897	117,097.20	1,221,164.34	1,338,261.54
1898	127,610.00	1,558,109.10	1,685,719.10
1899	247,538.00	1,048,436.75	1,295,974.75
1900	348,678.03	1,356,846.48	1,705,524.51
1901	508,466.00	1,379,927.84	1,888,393.84
1902	483,944.02	1,585,083.00	2,069,027.02
1903	483,908.15	1,233,384.00	1,717,292.15
1904	562,142.76	2,041,295.02	2,603,437.78
1905	596,579.50	1,467,582.22	2,064,161.72
1906	686,483.10	1,485,725.20	2,172,208.30
1907†	389,126.11	671,102.20	1,060,228.31

† First six months only.

PETROLEUM EXPLOITATION IN PORTUGAL.

By EUGENE ACKERMANN, E.M.

According to an interesting article in a recent issue of the *Mining Journal* by Mr. Eugene Ackermann, E.M., systematic boring for petroleum commenced to be undertaken in Portugal at the beginning of the year. There are, says Mr. Ackermann, in Portugal, many districts likely to contain petroleum. This is specially the case at Torres Vedras and then at Leiria, where it is the most likely that payable deposits of oil might be found. Torres Vedras is about 67 kilos. to the north of Lisbon; it takes two hours by rail to go there from Lisbon. On the other hand, Leiria is situated about 96 kilos. to the north of Torres Vedras, and it takes three hours to go by rail from Torres Vedras to Leiria.

The decided indications of petroleum in some of the districts of Portugal are chiefly confined to the upper Jurassic formation. The upper Jurassic series in Portugal is composed of beds of limestone, some of which exhibit the Oolitic structure characteristic of some calcareous rocks of that period. For many years the bituminous character of many Jurassic sandstones and marls has been known.

Approaching Torres Vedras from the south are three railway tunnels passing through a limestone rock, which carries clay, and in the cracks of the same, bitumen, whilst the fissures of the limestone are filled with gypsum. In the east of the tunnel of Torres Vedras petroleum is dripping from the roof of the tunnel. The quarry, before coming to the tunnel, contains pockets of oil, and opposite the quarry there is a mountain where the rocks contain about 10 per cent. of bitumen. The dip of these limestone beds is towards the west, at an angle of 15 to 25 degrees. On the opposite side of the valley in which Torres Vedras is situated there are hills of a red sandstone of the upper Jurassic period, and this sandstone extends over several kilometres, and is impregnated with bitumen, and gives off a smell of oil when freshly broken. The dip of the formation is to the west, towards the sea, at an average angle of 12 to 15 degrees. The formation appears to flatten as it approaches the sea, and the distance to the sea is about 16 kilometres. The anticline runs almost exactly west, and is about 25 kilometres in length from the sea coast to the village called Machial.

So far as the district of Leiria is concerned, it is about 700 or 800 metres from the village of Granja, towards the valley of the Liz river, that there are out-croppings of sandstone of upper Jurassic age. Here there are traces of old furnaces for the distillation of bitumen. In the Leiria district the execution of trial borings would not be as favourable as in the Torres Vedras district, as there are intrusions of volcanic rock. Present indications at Cascaes and Cintra are not very important; however, if some oil is to be found there, it would be very important on account of its proximity to the sea and near to Lisbon.

To resume: by far the best indications of petroleum are found in the neighbourhood of Torres Vedras. It is

here, therefore, that the best yield of petroleum may be expected.

Considering the importance which would attend the discovery of petroleum in payable quantities in Portugal, and the immense possibilities in the development of such an industry in Portugal, the testing of the ground by boreholes is well worth the expense that would be incurred. Boreholes alone will solve the problem of the existence in the soil of payable quantities of petroleum. The reason there is no hesitation in fixing Torres Vedras as the best region for the commencement of exploration is that the indications are as good as in other places, while the dip and regularity of the strata are peculiarly suitable for the accumulation of petroleum as well as for carrying out exploration. In what quantity will the petroleum be encountered, and at what depth? It is rather difficult to answer these questions. It is, however, certain that indications so general and of so great a thickness denote sufficient richness to encourage research. As to the depth at Torres Vedras, the various super-Jurassic strata are relatively thick, and it is possible that the depth to be reached will be at least 350 to 400 metres before the first exploitable level is encountered.

ROUMANIAN PRODUCTION DURING JANUARY.

The total production of crude oil at the Roumanian oil fields during January amounted to 94,766 tons, as against 92,259 tons. The January figures are not complete, and about 7,000 tons more have to be added for firms who have not sent in their returns, which will bring the final total for January up to 101,500 tons.

The production of separate fields in January was as under:—

	January, 1908.	December, 1907.
	Tons.	Tons.
Prahova District—		
Bustenari	33,668	36,883
Campina-Poiana	26,234	21,598
Moreni	27,126	23,710
Baicoi-Tintea	3,955	4,425
Other Fields in Prahova ..	383	1,554
Total for Prahova	91,366	88,170
Dambovitza District	1,966	2,496
Buzeu District	721	704
Bacau District	713	889
Total	94,766	92,259

It will be observed that there has been a considerable increase in production at Campina and Moreni, whilst Bustenari shews a decline.

The production of the leading firms in January was as under:—

Steaua Romana—	Tons.
Bustenari	9,552
Campina	16,530
Other Fields	1,282
Total	27,364
Regatul Roman Co.	24,944
Bustenari Co.	9,088
Romano-American Co.	9,543
Telega Oil Co.	3,804
International Co.	3,529
Astra Co. (Pleyte)	3,166
Trajan Co.	2,790
Colombia Co.	2,001
Aquila Franco-Romana	1,893
Nafta Co.	1,563
Alfa Co.	1,825

Production of Petroleum in South-Eastern Illinois.

AN INTERESTING CHAPTER FROM A RECENT GOVERNMENT PUBLICATION.

By Mr. W. S. BLATCHLEY.

(Concluded from page 98.)

When the nitro-glycerine is exploded, a person 100 yards away will, after an interval of 30 to 50 seconds, experience a slight jarring of the earth, accompanied by a muffled report somewhat louder than a pistol shot. A minute or so thereafter a roaring sound is heard and a solid column of oil and water is seen issuing from the mouth of the bore. This rises higher and higher until it finally reaches far above the derrick and there breaks into spray. Blown up with it are many fragments of stone and the remains of the tin canisters, shattered into a thousand particles. Pieces of porous rock blown up from a depth of a thousand feet often weigh six to eight pounds.

The flow of oil resulting from the explosion usually soon subsides and, as soon as possible after resetting the casing, tubing two to two-and-a-half inches in diameter and reaching to the bottom of the bore, is put in and connected with a tank which has been erected near by. These tanks are cylindrical, are constructed of wooden staves, and are usually gauged to hold 250 barrels each. In such a tank each inch in depth equals two-and-a-half barrels of oil; therefore, in oil field vernacular, a yield of "ten inches a day" means 25 barrels. The cost of such tanks in the Casey field in 1906 was \$95.00, and in the Crawford county field \$100.00.

After tubing the well and connecting it with the tank, the necessary pumping apparatus must be attached. If a number of wells are to be drilled a power house is located near the centre of the lease and a small gas or steam engine placed therein. Each well is supplied with a jack and balance weight, to which the necessary pumping or sucker rods which ply up and down inside the tubing are attached. When a number of wells are pumped by one engine the power is transmitted to the pumping jack of each by means of steel pull rods or wire ropes provided with suitable ankle knees to change the direction of the pull. In the Casey field where the surface is level the rods run about two feet above the ground and rest in notches cut in the top of short posts or props.

Where the surface is broken or uneven the rods are suspended above the ground by ropes attached to poles or posts which are set in a row between the power house and the well. The engine in the power house runs an oscillating pull-wheel which gives horizontal movement to the rods radiating from it to the different wells. The pull-wheel draws the rods in one direction, and on the return the weight of the sucker rod, hanging from the jack, draws them back. In this way wells have been pumped one mile from the power house, and often as many as twenty wells, and sometimes as many as forty, are pumped by a single engine. More than twenty-five or thirty are, however, too many,

for if the power should happen to break down, all the wells are stopped. Again, a pumper (the man in charge of the engines and wells) cannot look after more than that number and do it right. The fuel used for pumping is usually gas, the wells on the lease often furnishing enough; though in many instances it is piped in from a distance. The material pumped is run first into a salt water barrel to settle out the water. The oil is drawn off from this into storage tanks.

But little trouble is experienced with salt water in the Casey field, provided sufficient care is taken in drilling to stop before the water-bearing stratum is reached. In the Casey-Westfield pool, this lies some distance below the oil-bearing limestone in the Siggins pool is usually just below the eight to fifteen feet of black shale which immediately underlies the productive sandstone. On account of the scarcity of fresh water to operate the engines and for use in drilling, the salt water from the producing rock is used on a number of the leases. This is usually pumped in small quantity with the oil into a barrel tank. From this the oil flows into the near-by storage tank, while the water is allowed to escape from the lower part of the barrel tank, into ditches and drains, or into pipes which lead to a storage reservoir.

The average cost of the first well on a lease in the Clark and Crawford county fields in the spring of 1906 was about as follows:—

	Clark.	Crawford.
	\$	\$
Rig	—	525
Drilling	400	1,000
Drive pipe	70	80
Casting	250	700
Shooting	100	120
Tubing and pumping outfit	150	200
Power house and power	500	500
Two tanks	190	200
Belting and lead lines	100	100
Incidentals	100	100
Totals	1,860	3,525

The incidentals include the cost of necessary teaming and the expenses (livery hire, board, etc.) of the operator or field manager while overseeing the work. The second and succeeding wells on the lease will each cost, in the Casey field, about \$800 less, and in the Crawford county field, \$1,400 less, as the rigs, where used, tanks, power house and power can be used for future wells, though there will be a loss of \$125 in tearing down and rebuilding the derrick, and the number of tanks will soon have to be increased. The cost of the lead lines and surface rods on a lease will increase proportionately to the number of producing wells.

After a tank has been filled with oil the latter must be steamed to reduce the impurities of sediment to a minimum. This is done by connecting pipes from the engine with the bottom of the tank and forcing steam through the oil. From three to four hours is usually

necessary to steam a 250-barrel tank. The process of "production" is then complete and the oil is ready for the market.

The cost of operating an oil lease in the Illinois field after the production has been established need not be more than \$100 per month, the salary of the pumper being \$60 and the cost of fuel about \$40. A dozen or even twenty wells can, however, be operated almost as cheaply as one after they have been connected with the power. An extra pumper may have to be employed, but otherwise no additional expense is entailed.

Where the plant has been established, it will pay to pump as low as three or four wells, even if the yield is only four barrels each per day, provided the price of oil is as high as it was on May 10, viz., 81 cents per barrel.

The estimate of expense and income from three four-barrel wells or four three-barrel wells, after deducting the royalty of one-sixth, is as follows:—

Income per month—			\$	\$
300 barrels of oil at 81 cents	..			243'00
Salary of pumper	..	..	60 00	
Cost of fuel	..	..	40'00	
			-----	100'00
Net income	..	..	..	143'00

With six two-barrel wells on the lease, the income would be the same.

From what has been written, it will be seen that the cost of drilling and operating a lease in the Casey, Illinois, field is lower than elsewhere in the eastern United States for the following reasons:—(a) The wells are very shallow, the producing rock in most instances being struck at less than 400 feet; (b) it is seldom that more than 100 feet of drive pipe and 320 feet of casing are necessary; (c) on account of a comparatively level surface a large number of wells can be connected to and pumped with one power; (d) gas or fuel or for running gas engines is available in many parts of the field, and if not present, coal is as cheap as in any other locality; (e) transportation facilities are good, a system of pipe lines permeating all parts of the main pools.

In the Crawford county field the expenses are higher, running about the same as in the main Indiana-Trenton Rock field.

In the Casey field, where the well is inside of productive territory and promises a fair output, but little difficulty is experienced in getting a pipe line of the Standard Oil Co. of Illinois laid to it. This company has loading racks at Oilfield, between Casey and Westfield, on the C. H. and D. Railway, and is erecting nine 35,000-barrel steel tanks one-half-mile north of Casey. Four of these were completed and filled with oil on May 10th, and the remaining five were to be finished as quickly as possible. From these tanks a six-inch line extends to the loading rack at Oilfield, near the centre of the Casey-Westfield pool, and a four-inch line to the Siggins pool.

When a tank is full or nearly so, the pumper notifies a gauger of the Standard Oil Co., who comes and measures its contents. A "donkey pump" is then connected with the tank and the oil pumped therefrom into the pipes running to the large storage tanks; about

one-and-a-half hours being necessary to empty a field tank.

After deducting two per cent. for sediment, leakage, etc., certificates are mailed to both the producer and the party owning the land, stating the number of barrels to their credit in the lines of the Standard Co., together with the market price of the same. These certificates can be cashed at the various banks in the oil field, or are payable over the counters of the company at Casey.

As the loading rack at Oilfield was not erected until June, 1905, the output prior to that time was stored in tanks. On a number of smaller leases, especially these in areas outside of the two main producing pools, the field tanks have not yet been connected with the loading station or large storage tanks and the wells are idle on that account.

For some reason, not well understood, the promoter of the fake oil company has not yet begun operations in Illinois. Usually a number of such companies are organised when a good strike is made in any region. Their available assets consist of little more than a superb allowance of gall, leases on a few hundred acres of supposed oil territory and a hundred or two dollars invested in prospectuses and stock certificates. Sometimes even the leases are lacking. The company does not expect to make money by producing oil, but by selling stock, and the number of those who pay out their hard-earned cash for a piece of engraved paper is usually large. Not one out of a hundred of such stock-selling companies ever pay back even a small percentage of the amount invested. Such companies reaped a harvest of millions of dollars during the Beaumont, Texas, oil excitement of 1902-1904. The highway robber who takes the money of his victim at the point of a gun is an honest man in comparison with some of these barefaced scoundrels who fleece victims of high and low degree with the glittering advertising sheets and stock certificates of their mushroom oil companies.

In order to develop any oil producing area and reduce the number of dry holes to a minimum, the trend, width and dip of the anticlines and synclines in the top of the oil producing stratum should be ascertained by an accurate determination of the surface levels between a number of wells. Where a bore for petroleum has resulted in a good producing well, the level of the surface of the oil bearing rock above or below tide should be carefully ascertained. By subtracting the surface level of the bore from the depth at which the oil bearing stratum is first struck, the surface of the latter in terms of sea level will be obtained, provided it is below tide. Where the oil bearing rock occurs above tide, the depth of it will be less than the sea level elevation of the bore and should be subtracted accordingly.

The location of the first half-dozen or so wells in any area a mile or two square must of necessity be a matter of guess work, but if the surface level of the top of the sand in each bore, productive or dry, be carefully ascertained, the trend of the anticline and the approximate limits of the field or pool can soon be determined.

TANK STEAMER CHARTERS DURING 1907.

MESSRS. HENRY FUNCK AND CO.'S CIRCULAR.

The annual list of Tank Steamer Charters made in the United Kingdom for the year 1907 has just been issued as usual by Messrs. Henry Funck and Co., of 101, Leadenhall Street, London. E.C. Owing to the length of the list, the Charters made during the last six months of the year have been held over until our next issue. The charters for the first half of the year were as under:—

	TONS CAP.	RATE PER TON.	PORTS OF SHIPMENT AND DESTINATION.	NUMBER OF VOYAGES.	CARGO.
JAN.	5000	£1,225 per month	On time	As many as possible over a period of 12 months.	Petroleum Products.
	2300	16/-	Kustendje—Vallö	1	Distillate.
	2200	13/6	Option to load one tank Spirit at 17/-		
			Batoum or Kustendje—United Kingdom or Continent, including Havre, Rouen, and Hamburg	2	(Pale and/or Black Lubricating Oils.
		8/6 } option for {	.. .. . A French Mediterranean Port		
		9/6 } one voyage {	.. .. . A Spanish Mediterranean Port		
	6100	12/-	Batoum or Novorossisk—United Kingdom	2	Refined.
	3800	14/9	United States (North Atlantic Ports)—United Kingdom	1	Refined.
			Option to load at Port Arthur (Texas) at 19/6		
	2750	15/6	Kustendje—United Kingdom or Continent (Ostende—Bremerhafen)	1	Spirit.
		16/-	.. .. . Hamburg		
	4700	11/-	Black Sea or United States (North Atlantic Ports)—United Kingdom or Continent, excluding Hamburg	8	Gas Oil
		11/6	Black Sea or United States (North Atlantic Ports)—Hamburg		
	4300	12/-	United States (North Atlantic Ports)—United Kingdom	1	Refined.
	3250	16/- 1 port }	United States (North Atlantic Ports)—West Coast Italy or Sicily		
		17/- 2 ports }	.. .. . Venice	1	Refined.
		17/-	.. .. . Lisbon		
		16/-	.. .. . Venice and Messina		
FEB.		18/- 2 ports	.. .. .	
	3800	21/- 2 ports	Port Arthur (Texas)—Barrow and London	1	Fuel Oil.
	3500	18/-	Kustendje—Rouen	1	Spirit.
	2500	22/6	Cuba—London or Liverpool	1	Molasses.
	6200	12/-	Black Sea—United Kingdom	6	Refined.
	3500	£1,200 per month	On time (£1,200, £1,175 and £1,150 per month for respectively periods of 9 months, up to 11 and up to 24 months)	—	
	8000	£3,000 per month	On time	As many as possible over a period of 3 years.	
	6000	12/-	United States (North Atlantic Ports) or Black Sea—United Kingdom or Continent (Ostend—Bremerhafen)	8	Refined or Crude.
		12/6	United States (North Atlantic Ports) or Black Sea—Hamburg		
	2200	14/-	Batoum or Kustendje—United Kingdom or Continent, including Havre and Rouen	2	(Pale and/or Black Lubricating Oils.
		14/6 }	.. .. . Hamburg		
MAR.		8/6 } option for {	.. .. . A French Mediterranean Port		
		9/6 } one voyage {	.. .. . A Spanish Mediterranean Port		
	2750	13/6	Black Sea—United Kingdom, excluding Manchester	1	Refined.
	2200	14/-	Batoum or Kustendje—United Kingdom or Continent, including Havre and Rouen	4	(Pale and/or Black Lubricating Oils.
		14/6 }	.. .. . Hamburg		
		8/6 }	.. .. . A French Mediterranean Port		
		9/6 }	.. .. . A Spanish Mediterranean Port		
	3800	17/6	Batoum or Novorossisk—Rouen	1	Refined or Crude.
	3000	20/-	Port Arthur (Texas)—United Kingdom or Continent	1	Gas Oil.
	2300	18/- 1 port	Batoum—United Kingdom or Rouen or Dunkirk or Antwerp or Hamburg	1	(Pale and/or Gas and/or Black and/or Refined Dark Red Lubricating Oils.
			Port Arthur (Texas)—Antwerp		
	2200	20/-	Kustendje—Cette	1	Distillate.
	2300	13/6	Port Arthur (Texas)—United Kingdom		
		17/6	.. .. . Continent	3 years	Fuel and/or Gas Oil.
		18/-	.. .. .	
	3250	20/- 1 port	Philadelphia—Calais or Dunkerque	2	Refined.
	3250	16/-	Batoum—Hull	1	Refined.
	1600	19/-	.. .. . United Kingdom or Continent (Havre—Hamburg)	1	Pale Lubricating Oil.
	5000	37/6 1 port	United States—Calcutta or Bombay	1	(Refined and/or Batching Oil.

N.B.—1. A number of charters have been made during the year for steamers to trade East of the Suez Canal and in the Far East, the particulars of which have not been disclosed.

N.B.—2. This compilation is to be considered as only approximately correct for the reason that it is not possible to trace every charter made, the exact rates paid, and all the conditions agreed upon.

	TONS CAP.	RATE PER TON.	PORTS OF SHIPMENT AND DESTINATION.	NUMBER OF VOYAGES.	CARGO.	
APRIL	3000	21/- 21/6 22/-	Port Arthur (Texas)—United Kingdom " Antwerp " Dunkirk 1/- per ton extra if to two United Kingdom Ports.. 1/6 per ton extra if to London and Liverpool, two ports	I	Fuel and/or Gas Oil	
	3000	19/6 first voyage 30/- 1 port } 2nd 31/6 2 ports } voyage	Black Sea—Cette Kustendje—La Palice and/or Rouen	2	Spirit.	
	3800	20/-	Philadelphia—Cette	I	Crude.	
	3800	20/-	" Rouen	I	Crude.	
	2200	13/- 1 port } 14/- 2 ports }	Kustendje—Marseilles and/or Cette.. .. .	I or 2, charter- ers' option	Refined and/or Distillate.	
	3800	17/6	United States (North Atlantic Ports) or Black Sea— United Kingdom	I	Refined.	
	2750	15/-	Black Sea—United Kingdom or Continent (Ostend-Bremerhafen)	As many as possible between the 15th June 1907, and 15th June, 1908, but four voyages for owners' account.	Refined.	
	2300	20/-	Batoum or Novorossisk—London	I	Refined.	
	2500	24/-	Port Arthur (Texas)—AntwerpI	Gas Oil.	
	4500	18/9	United States (North Atlantic Ports) or Black Sea—A French Atlantic Port, excluding Rouen			
		20/6	(NorthAtlanticPorts) or Black Sea—Rouen	2	Spirit.	
		Option to carry refined oil to a French Atlantic Port, excluding Rouen, at 16/-, and to Rouen at 17/7				
		16/-	United States (North Atlantic Ports) or Black Sea—United Kingdom or Continent, excluding Hamburg	I	Refined.	
	6000	16/6	United States (North Atlantic Ports) or Black Sea—Hamburg			
	2300	25/-	Port Arthur (Texas)—United Kingdom or Continent (Ostend-Bremerhafen)	I	Gas Oil,	
	3500	21/- 1 port	United States (North Atlantic Ports)—Calais or Dunkirk	2	Refined,	
	2200	21/- 1st voyage 19/- 2nd voyage 17/- } 3rd 21/- } voyage {	Kustendje—Rouen Philadelphia—Cette Kustendje—Cette Rouen	3	Distillate.	
	3500	21/- 1 port	New York or Philadelphia or Kustendje—Calais or Dunkirk or Havre	2	Crude and/or Distillate.	
	5000	35/-	Sumatra—United Kingdom or Continent (Ostende—Hamburg, both inclusive)	I	Spirit.	
	MAY	3250	25/- 1 port	United States (North Atlantic Ports)—Cette or Marseilles or Port de Bouc or St Louis du Rhone	I	Refined.
		3800	22/6 1 port	Philadelphia—Rotterdam or Amsterdam or Hamburg ..	4	Refined.
		3500	22/6	United States (North Atlantic Ports)—United Kingdom	I	Refined.
3000		21/6	Batoum or Novorossisk or Kustendje—A French Atlantic Port, excluding Rouen	I	Crude or Distillate.	
2200		22/6	Batoum or Novorossisk or Kustendje—Rouen			
		14/-	Kustendje—Cette	I	Distillate.	
6200		16/- 2 ports	United States (North Atlantic Ports)—Italy and/or Sicily	I	Refined.	
5400		14/- basis	United States (North Atlantic Ports) or Black Sea—United Kingdom or Continent.. .. .	5 years	Petroleum Products.	
3250		30/-	Black Sea—Rouen 1/6 per ton extra if discharging at La Pallice and Rouen (two ports)	I	Spirit.	
1700		23/- 1 port 24/-	Black Sea—Havre or Calais Rouen	I	Distillate.	
3800		25/- 2 ports 24/-	Havre and Rouen or Rouen or Calais United States (North Atlantic Ports) or Black Sea—A French Atlantic Port, excluding Rouen	2	Crude.	
JUNE	2200	25/- 14/6	United States (North Atlantic Ports) or Black Sea—Rouen Batoum or Novorossisk—Cette 6d. less if loading at Kustendje	I or 2	Distillate.	
	4300	18/-	United States (North Atlantic Ports)—A French Atlantic Port, excluding Rouen			
		19/- 19/-	United States (North Atlantic Ports)—Rouen Two French Atlantic Ports	5	Refined.	
		Option : Black Sea—Cette or Marseilles or Port de Bouc (one port), at 14/6				
		Option : United States (North Atlantic Ports)—Cette or Marseilles or Port de Bouc (one port) 21/- ..				
	3000	17/6	Port Arthur (Texas)—United Kingdom	I	Fuel and/or Gas Oil.	
	3000	21/-	" " " " " " " "	4	Fuel and/or Gas Oil.	
	6100	29/-	United States ("North Atlantic Ports) or Black Sea—A French Atlantic Port, including Rouen	I	Refined.	
	4500	28/4	United States (North Atlantic Ports or Black Sea)—A French Atlantic Port, excluding Rouen			
		31/-	United States (North Atlantic Ports) or Black Sea—Rouen Option to carry refined oil to a French Atlantic Port, excluding Rouen, at 24/2, and to Rouen at 26/7	3	Spirit.	
	2200	25/-	Port Arthur (Texas)—Antwerp	I	Gas Oil.	
	3000	18/-	Philadelphia—United Kingdom	I	Refined and/or Gas Oil.	
	3000	20/-	" " " " " " " "	I	Refined and/or Gas Oil.	

(To be concluded.)

THE OLINDA OIL FIELD OF SOUTHERN CALIFORNIA.

By GEORGE HOMANS ELDRIDGE and RALPH ARNOLD.

(Concluded from page 110.)

Most of the Columbia wells are located on the south side of the synclinal trough; some, however, are close to the axis, while two or three of excellent yield appear to be in strata that dip to the south or are intensely crushed. One of the deeper wells in which, up to the time of the investigation, no oil had been found penetrates at the collar the organic shale of the Puente. The others, which start in heavy sandstone, probably of the Puente formation, are highly productive.

The easterly wells of the Santa Fe and those of the Fullarton and Columbia Oil Companies appear thus to have been drilled in the Puente formation in ground whose structure is somewhat uncertain. Most of them lie a little south of the line of maximum crumbling. It may be inferred, therefore, that the horizon of their oils is approximately that of the oils of the Puente Oil Co.'s wells five miles farther west. Moreover, the logs of the wells indicate the presence in depth of shale similar to that of the Puente oil field, whereas in other portions of the Santa Fe area the strata are of the more open and porous nature characteristic of the Fernando. This similarity of strata penetrated in the Puente field and the east end of the Olinda field accounts for the similarity of the oils of the two localities. The gravity varies between 23° and 35° B., the oil of the Olinda field being somewhat the lighter.

Typical Puente shale with steep dip is exposed a few feet east of the Columbia camp, several hundred feet south of the eastern wells of this company. The outcrop is in line with others of the same nature up to Soquel canyon, and it is probably continuous with them, the Fernando having here crossed to Telegraph canyon. Loose shale fragments are also found over a considerable area in the same general region south of the wells.

Along the middle portion of the field, in the eastern half of the Graham-Loftus tract, the strata occupying the face of the hills north of the wells but south of the syncline, extending from the region described in the foregoing paragraph, include yellow and grey concretionary sandstone of the Puente type, with the associated siliceous shale and a succession of sandstone and arenaceous shale, also yellow and grey but apparently devoid of concretions and of the minor organic forms that characterise the Puente. There appear to be two formations in juxtaposition—one undoubtedly Puente, the other closely resembling the Fernando. Their relations suggest the locus of the Puente fault, a view strengthened by the sharp disturbance affecting the strata in the adjacent gulches. The strike of both formations is the same, about $N. 70^{\circ} W.$ The fault plane, on the whole, is believed to pass a short distance south of the northernmost of the Graham-Loftus wells, No. 17, but north of the others in this vicinity. With the exception mentioned, therefore, all the wells in this part of the field have apparently been drilled in the Fernando formation, and this view is borne out by the

fact that conglomerate is encountered at various depths in the wells of both the Santa Fe and the Graham-Loftus companies. The position of these wells is believed to be on the northern limb of the subordinate anticline south of the fault.

Outcrops of conglomerate and siliceous shale about 125 feet north-west of the Santa Fe No. 12 well may be regarded as locating the position of the main Puente fracture for this part of the field. The strike of the conglomerate ranges from $N. 85^{\circ} W.$ to east and west; the dip 35° — $40^{\circ} N.$ The shale, as usual, shews large crumbles for a considerable distance from the fault. The westernmost well of the Santa Fe Co., No. 37, is close to the line of rupture, possibly a little to the north of it.

The structure just described continues with some variation, not only to the west end of the field, but into Brea canyon and the territory north and south. The locus of the fault as it crosses the divide between the Olinda and Brea valleys is obscure, but it is not far from the point of least elevation. North of this point heavy beds of Puente sandstone lie in vertical or overturned position, bending, however, to a southerly dip of 20° or less as they pass to the summits of the hills above. South of the divide and for a mile or more along the southern slope of the ridge north of Brea canyon the siliceous shale of the Puente outcrops. Although this shale is in natural sequence with the Puente sandstone on the north, it is believed that, on account of irregularities in adjacent areas, the two beds are separated by the Puente fault, or at least by a subordinate fracture. In Brea canyon the syncline that in the Olinda field lies immediately north of the fault disappears, although other flexures in considerable number, among them a syncline of some importance, may be observed along the slope of the hills to the west.

In the region of the Santa Fe wells the details of structure for the area along the interior valley underlain by the Fernando conglomerate, in which much of the development has taken place, are somewhat obscure. In a general way, however, it is evident that east of the western group of Columbia wells the strata are deflected from their general strike of $N. 65^{\circ}$ — $70^{\circ} W.$ to $N. 45^{\circ} W.$ in the vicinity of the south-western Santa Fe wells, thence bending to $S. 70^{\circ} E.$ and passing onward into the ridge south of Telegraph canyon. A trace of a similar and concentric deflection, with marked local folds, exists also in the rocks of the older formation north-east of the Fernando area, in the hill slopes north of the Santa Fe village, and the flat to the east. The explanation may be that compression took place after faulting, affecting the strata in a like manner on both sides of the general fracture. Still, this occurrence may be a coincidence rather than one of direct relationship in the movements of the beds.

Again, the Fernando formation, though of comparatively steep southerly dip in the exterior ridges of the field, assumes a much lower angle of inclination farther

north in the interior valley region, with an actual northerly dip, as evidenced by the logs of the wells of the Graham-Loftus and Columbia Oil Companies, near the line of the fault or of maximum folds. In other words, there is apparently, through at least the western half of Olinda valley, an anticline whose axis coincides with that of the valley, trending about N. 65° W.

The anticline is clearly traceable in the eastern face of Brea ridge, the axis passing through the southern group of wells of the Columbia Oil Co., or probably a short distance to the south of all these wells. Evidences of the fold also appear in the structural lines that cross the crest of the ridge diagonally in Union ground, a mile west of the Columbia wells, and in some of the gulches that cut the northern face of the ridge in the same vicinity. The strikes and dips vary according to the position of the beds in the fold. It is possible that the anticline continues westward to the Brea canyon field, being identical with the fold suggested along the line of seepages in the bottom of the valley. Some irregularity is displayed in the disposition of the strata along the eastern third of Brea ridge, the Fernando formation being confined to the southern limb of the anticline, though crossing to the north of the axis in the region of the Columbia wells, and possibly farther west, in the ridge between the forks of Brea canyon.

•How far to the east the anticline extends is undetermined. It does not appear in the Fernando at the point of the ridge between Soquel and Telegraph canyons, although the Puente beds here have the opposite or northerly dip and half a mile up Telegraph canyon shew distinct evidences of a fold. It may be that the anticline continues through to this point, the Fernando, however, no longer bending over the crown of the arch.

The direction which the eastward extension of the Olinda field may take is somewhat problematic. The development in Columbia ground follows the northern fracture, or at least the line of excessive disturbance passing up Soquel canyon to the entrance of Carbonne canyon; the surface conditions prevailing in the western half of the productive territory, however, continue across to Telegraph canyon, except that the Fernando conglomerate is in contact with lower members of the Puente than to the west. Apparently the beds are somewhat transitional in their nature, grey micaceous sandstone and shale lying beneath the Puente sandstone, the precise horizon varying from point to point. The structure of the lower beds is very complicated. In the

northern face of the ridge between Telegraph and Soquel canyons the rather heavy grey and yellow gritty sandstone dips to the north, while the associated brown argillaceous shale, only 150 feet distant, has a southward inclination. The strike of both is N. 65° E. In the southern face of the ridge the principal dip of the older rocks is 45°—80° N., although half a mile up Telegraph canyon the beds of the same character begin to shew a southerly dip, which is maintained well into the hills to the south. The conglomerate south of these beds strikes N. 65° W., nearly parallel with the axis of the anticline referred to above; it dips 80°—45° S., according to the distance from the fault line. It rests upon older beds that dip in some places to the north, in others to the south, the northward-dipping rocks lying near the mouth of Telegraph canyon. The similarity of the conditions in Telegraph canyon and in the western half of the Olinda field is thus obvious, and while there are slight differences it would, nevertheless, seem reasonable, from surface conditions, to expect equal chances for obtaining petroleum along the line of the fault or unconformity in the two localities.

In the discussion of the relations of Fernando to Puente in the region of Telegraph canyon the question of faulting or unconformity arises with the same force as elsewhere. The conditions are explicable on the basis of unconformity, the upheaval and erosion of the older rocks prior to the deposition of the Fernando being presupposed; they may also be explained by faulting, or they may be due to the two causes combined.

The oil wells of the Olinda field number over 100, and except a few, chiefly along the outer ridge, all have been of wonderful productiveness, yields of 700 to 1,000 barrels of oil per day having been reached. The maximum depth attained is 3,000 feet. The wells are ranged along two lines, the northern group following the zone of greatest disturbance, together with the fault, and the southern following the land line which separates the properties of the Santa Fe and Fullerton Consolidated Oil Companies and having no connection whatever with the structure.

The oils of the Olinda field vary in gravity from 12° to 35° B., the heaviest being found at the west end of the field in members of the Fernando, those of 18° to 20° B. in the south-western part, also in the Fernando, and those between 23° and 35° B. in the eastern half of the productive area in various horizons of the Puente.

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The American Oil Market.

New York, Week ended Feb. 8th.

Operations in the lower south-west fields continue to be handicapped by the unfavourable weather conditions, but sufficient work has been in progress during the week to indicate that operators are attempting to surmount the difficulties in the keen search for new producing territory. The best incentive to the sustained interest is the record of late completions in the Grant district of Ritchie county, West Virginia. While a material decline to 360 barrels each is to be noted in the output of the two biggest producers, there has been nothing to supersede them in the entire section. Another well in the district is yielding steadily 175 barrels a day, our previous report having credited it with 200 barrels. Attempts to find an extension to this pool have naturally been stimulated, but a test one mile to the east of one of the best wells failed to disclose the presence of oil through the Keener sand. Other tests are due shortly. Another creditable producer is the one at Folsom, Harrison county, which is maintaining a flow of about 125 barrels. The above-named are said to be the only wells in West Virginia that can be included in the class of 100 barrels or more a day. Recent failures in the deep sand operations of Wetzell and Monongalia counties in the same State seemed to have occasioned little check upon further developments, and while many of the attempts must be classed as dusters, an occasional show for a fair producer has rewarded operators. Encouraging results have been encountered in the Holladays Cove pool in Brook county, West Virginia. While no remarkable wells have been brought in of late, says the *Oil, Paint and Drug Reporter*, they are of a fair average capacity and the producing formation is described as regular. Light pumpers, where dusters were not experienced, are the rule of recent operations in Pennsylvania. In the Bristoria district of Greene county the Ross and Dunn well, which was brought in last July, is credited with sustaining an output of 150 barrels a day. In the southeastern Ohio field, interest has centred in recent tests in the Clinton lime district of Fairfield county, but nothing of an especially encouraging character has as yet been reported. The incentive to operators in the district was, according to late advices, holding up at 280 barrels a day. The slump in development work in the Mid-Continent field which began in November was more pronounced during January, the report for the month shewing completions of but 258 wells, or nearly one-half the record for last October. Of the January completions, 169 were successful oil wells, producing 10,100 barrels. Despite the practical shut-down for three months, the congestion of stocks seems to have been relieved to a slight extent.

REFINED AND PRODUCTS.—Domestic requirements of refined have been of steady proportions, and while the export movement from the local port has not embraced the same liberal extent as was previously noted, the volume for foreign account during the week has been of satisfactory proportions, clearances aggregating 9,264,780 gallons, of which 6,225,000 were forwarded in bulk. For the former week we recorded 10,227,740 gallons (7,740,000 in bulk). There has also been more activity in additional chartering, engagements being reported as follows;—185,000 cases for April shipment to China, 55,000 cases for May shipment to Japan, 160,000 cases for February-March shipment to China, all New York loading. Philadelphia engagements comprised 160,000 cases for Japan, April-May, and 170,000 cases for Japan for the same destination, Feb.-March.

There have been no further changes in the products during the interval and the market presents nothing of particular interest. Trading, on the whole, has remained within moderate limits. Naphtha has been in slight request for export, clearances for the week aggregating 15,300 gallons, against 29,350 gallons during the previous week.

Foreign requirements of residuals have also been of reduced proportions, the total for the week being 13,750 gallons, against 427,700 gallons previously noted.

CLOSING QUOTATIONS

	CRUDE.	Week ended	
		Feb. 1.	Feb. 8.
	In cents per gallon.	1908.	1908.
Pennsylvania crude in bbls.	—	—
Pennsylvania crude in bulk	—	—
Residuum, bbls. for export	—	—

CRUDE AT THE WELLS.

The quotations for oil represented by credit balances were:—

		Week ended	
		Feb. 8.	Feb. 8.
		1907.	1908.
Pennsylvania .. .. .	..	\$1.58	\$1.78
Tiona .. .. .	..	1.68	1.78
North Lima .. .. .	..	0.90	0.94
South Lima .. .. .	..	0.85	0.89
Indiana .. .. .	..	0.85	0.89
Illinois, heavy, below 30 deg. ..	..	—	0.60
Kansas and Indian Ter., 32 deg. and above .. .. .	..	0.39	0.41
Heavy .. .. .	..	—	0.28
Humble, Tex. .. .. .	..	—	0.75
Saratoga .. .. .	..	—	0.73
Sour Lake, Tex. .. .. .	..	—	0.77
Jennings, La. .. .. .	..	—	0.72
CANADIAN OIL:			
Petrolia .. .. .	..	1.30	1.34
Oil Springs, less pipeage .. ..	..	1.37	1.41

REFINED—FOR EXPORT.

		Week ended	
		Feb. 8.	Feb. 8.
		S.W.	W.W.
Barrels, cargo	per gal.	8.75	@ 10.75
Philadelphia .. .. .	..	8.70	@ 10.70
Bulk, New York .. .. .	..	5.00	@ 7.00
Bulk, Philadelphia .. .. .	..	4.95	@ 6.95
Cases, New York .. .. .	..	10.90	@ 13.90
Cases, Philadelphia .. .. .	..	10.85	@ 13.85

REFINED IN CASES—110 FIRE TEST.

		Week ended	
		Feb. 1.	Feb. 8.
		1908.	1908.
3,000 to 10,000 .. .. .	..	11.05	11.05
1,000 to 3,000 .. .. .	..	11.10	11.10

REFINED—JOBGING LOTS.

In barrels, pkgs. included.

		Week ended	
		Feb. 1.	Feb. 8.
120 fire test, S.W.	in barrels	12	12
130 fire test, S.W. .. .. .	..	12½	12½
150 fire test, W.W. .. .. .	..	13½	13½
In bulk from tanks .. .. .	..	10	10
300 fire test .. .. .	..	13½ @ 14	13½ @ 14

NAPHTHA AND GASOLINE.

		Week ended	
		Feb. 1.	Feb. 8.
Naphtha, Auto, 66 @ 72 deg. .. ..	..	14.00	14.00
Gasolene, 86 deg. .. .. .	..	24.00	23.00

PENNSYLVANIAN OIL RUNS from Jan. 28th to Feb. 10th were:—Jan. 28th, 199,452; Jan. 29th, 104,193; Jan. 30th, 201,983; Jan. 31st and Feb. 1st, 35,594; Feb. 2nd, 108,704; Feb. 3rd, 63,648.

THE DELIVERIES OF PENNSYLVANIA OIL from Jan. 29th to Feb. 11th were:—Jan. 29th, 166,790; Jan. 30th, 195,545; Jan. 31st, 193,560; Feb. 1st and 2nd, 273,284; Feb. 3rd, 151,075; Feb. 4th, 122,898.

CLEARANCES FOR THE WEEK.

During the week ended Feb 7th, and since Jan. 1, the clearances of petroleum, in gallons, from the port of New York, were as follows:—

		Week.	Year.	1907.
Refined	9,264,780	48,380,030	55,832,700	
Crude	859,840	864,540	204,270	
Naphtha	15,300	387,400	816,790	
Residuum	13,750	453,450	6,250	

EXPORT STATISTICS.

The total exports from the port of New York and from the United States have been:—

		Gallons.
From New York, week ended Feb. 7th ..	..	13,212,880
Total from New York, from Jan. 1st, 1908 ..	..	78,704,581
Same period last year .. .. .	..	74,647,871
Increase .. .. .	..	4,056,710
From United States, week ended Feb. 7th ..	..	21,603,740
Total from United States, since Jan. 1st, 1908	140,739,003
Same period last year	130,684,731
Increase	10,054,272

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The "Review" Shipping List.

FEBRUARY 28, 1908.

(The following abbreviations are used in this table:—L. Left; P. Passed; Arr. Arrived; Sp. Spoken; Tr. Trading.)

Vessel.	From.	For.	Latest Date and Position.	Vessel.	From.	For.	Latest Date and Position.
ALCHYMIST	Port Talbot	London	Arr. Feb. 18	EZIO	—	—	Coasting Peru
ALEMBIC	Shoreham ..	London	Arr. Jan. 20	FRANCE MARIE ..	Philadelphia	Santander ..	L. Feb. 21
ALICE ISABELLE..	Sables d'Olonne	Philadelphia	Arr. Feb. 19	GEESTEMUNDE ..	Tyne	Philadelphia	Arr. Feb. 20
AMERICAN	New York ..	Puerto	L. Feb. 14	GENESSE	Manchester	Galveston ..	At St. Michaels, Feb. 14
APPALACHEE	Bengkalis ..	San Francisco	Arr. Feb. 8	GEORGIAN	Penarth	Philadelphia	L. Feb. 12
APSCHERON	Venice	Trieste	Arr. Feb. 9	PRINCE			
ARAL	Hamburg ..	Philadelphia	P. Dunnet Head, Feb. 16	GOLDMOUTH	Cardiff	Batoum	Arr. Feb. 23
ARAS	Penarth	Philadelphia	P. Barry Island, Feb. 25	GUTHEIL	Hamburg ..	Philadelphia	L. Tyne, Feb. 26
ARGYLL	—	—	Coasting U.S. (Pacific)	HAINAUT	Antwerp	Alexandria ..	L. Feb. 20
ASHTABULA	San Francisco	Shanghai ..	Arr. Feb. 27	HARRY	Hull	New Orleans	Arr. Feb. 14
ASTRAKHAN	Tyne	Philadelphia	P. Nantucket, Feb. 26	WADSWORTH			
ATLAS	—	—	Coasting U.S. (Pacific)	HELIOS	Hamburg & Tyne	Philadelphia	Arr. Feb. 24
AUGUSTA	Tyne	Philadelphia	Arr. Feb. 21	HERMIONE	Tyne	Philadelphia	P. Dunnet Head, Feb. 23
AUGUST KORFF..	New York ..	Hamburg ..	L. Feb. 16	HOTHAM	Dunkirk	Sunderland ..	In Port, Feb. 19
AUREOLE	Penarth	New York ..	Arr. Feb. 23	NEWTON			
AZOV	—	—	Trading on W.C. of South Amca.	HOUSATONIC	Barrow	New York ..	Wrecked, Maiden Rock, Jan. 5
BAKU STANDARD	Cardiff	Philadelphia	Arr. Feb. 12	IMPERIAL	—	—	Tr. on Lakes btn. U.S.A. and Can.
BALAKANI	Port Arthur (Texas)	Hamburg ..	P. Lizard, Feb. 26	IOANNIS COUTZIS	Batoum	Rouen	P. Constant'ple, Feb. 18
BATOUM	Rotterdam ..	Tyne	Arr. Feb. 18	IROQUOIS	London	Barry & New York	At Barry, Feb. 25
BAYONNE	Batoum	Messina	At Malta, Feb. 18/19	J. B. AUG. KESSLER	London	Batoum	Arr. Feb. 25
BEACON LIGHT..	Tyne	Port Arthur (Texas)	P. Lizard, Feb. 26	JAMES BRAND	London	Philadelphia	Arr. Feb. 20
BLOOMFIELD	Penarth	Batoum	P. Gibraltar, Feb. 24	JULES HENRI	New York ..	Marseilles ..	L. Feb. 17
BORJOM	Alexandria..	Batoum	L. Constant'ple, Feb. 16	KURA	Philadelphia	Hamburg ..	P. Dungeness, Feb. 25
BRILLIANT	Copenhagen	New York ..	Arr. Feb. 20	LA CAMPINE	Antwerp	Baltimore ..	P. Lizard, Feb. 15
BROADMAYNE....	Cette	Philadelphia	L. Feb. 25	LA FLANDRE	Antwerp	Philadelphia	P. Nantucket, Feb. 26
BULLMOUTH	Samboe	Yokohama ..	L. Feb. 22	LA HESBAYE	Antwerp	Batoum	P. Gibraltar, Feb. 14
BULYSESSES	Rangoon....	Europe	P. Gibraltar, Feb. 25	LA MADELEINE ..	Algiers	Brest	Arr. June 16
BURGERMEISTER	Tyne	Philadelphia	Arr. Feb. 19	LA VIGUESA	Corunna	Port Arthur (Texas)	L. Jan. 5
PETERSEN				LACKAWANNA....	Kurrachee ..	Bengkalis ..	Arr. Feb. 7
CALCUTTA	Shanghai ..	San Francisco	Arr. Feb. 12	LANSING	San Francisco	Kiber	At Honolulu, Feb. 12
CAPTAIN A. F. LUCAS	New York ..	Flushing....	P. Dungeness, Feb. 25	LE COQ	Blaye	Philadelphia	Arr. Feb. 14
CARDIUM	Batoum & Kurrachee	Bombay	Arr. Feb. 23	LOUTSCH	Batoum	Odessa	L. Jan. 14
CATANIA	San Francisco	Portland....	L. Feb. 8	LUCERNA	Philadelphia	Bergen	Arr. Feb. 24
CAUCASIAN	Philadelphia	Rotterdam ..	Arr. Feb. 24	LUCILINE	Philadelphia	Dunkirk	In Dunkirk Rds, Feb. 26
CHARLOIS	Philadelphia	Rotterdam ..	Arr. Feb. 23	LUMEN	Kustendje ..	Havre	Cld. Constant'ple, Feb. 20
CHESAPEAKE	Tyne	New York ..	Arr. Feb. 25	LUX	Philadelphia	Rouen	Arr. Feb. 26
CHESTER	Antwerp	Batoum	Cld. Constant'ple, Feb. 20	MAKKAVEL	Odessa	Kustendje ..	L. Feb. 18
CIRCASIAN	—	—	Trading on W.C. of South Amca.	MANHATTAN	Tyne	New Orleans	Arr. Feb. 26
PRINCE				MANNHEIM	New York ..	Hamburg ..	L. Feb. 21
CLAM	Singapore ..	River Plate..	Arr. Feb. 17	MARGARETHA ..	Kustendje ..	London	Arr. Feb. 23
COL. E. L. DRAKE	San Francisco	Seattle	At Bellingham, Feb. 11	MAVERICK	Seattle	San Francisco	Arr. Oct. 6
COWRIE	Aroe Bay ..	Singapore ..	L. Feb. 24	METEOR	Vladivostock	Shanghai ..	Arr. Jan. 5
CUYAHOGA	Manchester	Philadelphia	L. Feb. 25	MEXICAN PRINCE	Kustendje ..	La Pallice or Rouen	P. Constant'ple, Feb. 17
CYMBELINE	Penarth	Port Arthur (Texas)	P. Barry Island, Feb. 6	MIRA	Newport	Falmouth & Port Arthur	Sp. Feb. 15, 36 N. 38 W.
CZAR NICOLAI II.	Batoum	Hamburg ..	L. Feb. 21	MUREX	Freshwater..	Hong Kong	L. Feb. 15
DAGHESTAN	Antwerp	Batoum	Arr. Feb. 23	NARRAGANSETT..	London	New York ..	Arr. Feb. 25
DAKOTAH	Balekappan	Shanghai ..	L. Feb. 8	NERITE	—	—	Tr. in China Seas
DELAWARE	Philadelphia	Belfast & Birkenhead	L. Feb. 17	NEW YORK	New York ..	Southampton	L. Feb. 22
DEUTSCHLAND ..	New York ..	Rotterdam ..	Put back, Feb. 27	OAKWOOD	Havana	Liverpool ..	Arr. Feb. 25
DIAMANT	Rotterdam ..	Philadelphia	P. Dungeness, Feb. 22	OCEAN	Amsterdam..	Philadelphia	P. Prawle Pt., Feb. 25
EDWARD	Hull	N. Orleans..	At Fayal, Feb. 18	OILFIELD	Philadelphia	Christiana ..	P. Dunnet Head, Feb. 25
DAWSON				ORIFLAMME	Philadelphia	Bordeaux ..	L. Feb. 26
ELAX	Samboe	Europe	P. Sagres, Feb. 23	OSCEOLA	Barry	Montevideo	P. Madeira, Feb. 23
ELISE MARIE	Tyne	New York ..	L. Feb. 10	OTTAWA	New Orleans	Port Arthur (Texas)	Sd. Pt. Eads, Feb. 17
ENERGIE	Philadelphia	Flushing....	P. Del. Break., Feb. 7	OURAL	Tyne	Batoum	P. Beachy Head, Feb. 24
ERIVAN	Hamburg ..	Batoum	P. Gibraltar, Feb. 19	PALEMBANG	—	—	Tr. East Indies & China Seas
ETELKA	Cette	Genoa	Arr. Feb. 25	PAULA	Tyne	New York ..	L. Feb. 24
EUPLECTELA	Hamburg ..	Rotterdam ..	Arr. Feb. 22	PECTAN	Port Arthur (Texas)	London	P. Dover, Feb. 24
EXCELSIOR	Hamburg & Tyne	New York ..	P. Dunnet Head, Feb. 25				

Vessel.	From.	For.	Latest Date and Position.	Vessel.	From.	For.	Latest Date and Position.
PENNOIL.....	Rotterdam ..	Philadelphia	Arr. Feb. 19	STANDARD	Hamburg ..	New York ..	Arr. Feb. 24
PERLAK	Madras	Singapore ..	L. Jan. 17	STROMBUS	Batoum	Singapore ..	L. Colombo, Feb. 15
PHOEBUS	New York ..	Hamburg ..	L. Feb. 20	SUN	Philadelphia	Avonmouth	P. Reedy Island, Feb. 15
PINNA	Yokohama ..	Gaviota	Arr. Feb. 18	SUNLIGHT.....	Port Pirie ..	Birkenhead	Arr. Jan. 31
POTOMAC	Avonmouth..	Tyne	Arr. Feb. 10	SURAM.....	Penarth	Kustendje ..	P. Barry Island, Feb. 25
PROMETHEUS...	New York ..	Rotterdam..	L. Feb. 18	SUWANEE	Philadelphia	Hull.....	P. Reedy Island, Feb. 13
PRUDENTIA	Muroran	Singapore ..	In Port, Feb. 19	SVIET	Odessa	Batoum	L. Feb. 14
QUEVILLY	Rouen.....	Philadelphia	L. Feb. 7	TELENA	Kustendje ..	Madras & Calcutta	Arr. Feb. 18
RION.....	Hamburg ..	Kustendje ..	P. Sagres, Feb. 24	TEREK.....	Port Arthur (Texas)	Amsterdam..	P. Cape Henry, Feb. 14
ROCK LIGHT	Kustendje ..	London	In Port, Feb. 27	TIFLIS	Antwerp	Philadelphia	L. Feb. 20
ROMANY.....	Freshwater..	Thameshaven	P. Prawle Pt., Feb. 27	TIOGA	London	Galveston ..	Arr. Feb. 20
ROSSIJA	Pensacola ..	Santander ..	Arr. Feb. 18	TONAWANDA	Hong Kong..	San Francisco	Arr. Feb. 16
ROTTERDAM	New York ..	Amsterdam..	L. Feb. 12	TROCAS	Swatow	Balekappan	L. Feb. 16
RUSSIAN PRINCE	Philadelphia	Galveston & Vera Cruz	L. Feb. 17	TURBO.....	Batoum	Hamburg ..	Ashore Haaks, Jan. 7
SALAHADJI	—	—	Tr. Sts. Settlem'ts and Java Seas	TUSCARORA	New York ..	Calcutta	At Port Said, Feb. 26
SAN CRISTOBAL..	Kustendje ..	Rouen.....	P. Sagres, Feb. 25	TWINGONE	Rangoon....	Madras	Arr. Dec. 12
SAN IGNACIO DE LOYOLA	Philadelphia	Pasages	Arr. Feb. 15	VEDRA.....	Yokohama ..	Palembang..	L. Feb. 10
SAXOLEINE	Tyne	Philadelphia	Arr. Feb. 24	VILLE DE DIEPPE	Rouen	Philadelphia	Arr. Feb. 13
SEMINOLE.....	Muroran....	San Francisco	Arr. Feb. 7	VOLUTE	Sydney	Newcastle ..	L. Feb. 23
SINGU	—	—	Tr. in East Indies	WASHINGTON....	New York ..	Hamburg ..	Off the Wight, Feb. 24
SNOWFLAKE.....	Novorossisk	Rouen	P. Constant'ple, Feb. 13	WEEHAWKEN	Philadelphia	Sunderland ..	P. Del. Break., Feb. 12
SOYO MARU	San Francisco	Yokohama ..	L. Gaviota, Feb. 9	WILLKOMMEN....	Stettin.....	Tyne	Arr. Feb. 26
SPONDILUS	Freshwater..	Europe	P. Perim, Feb. 24	WINNEBAGO	San Francisco	Amoy & Canton	At Hong Kong, Feb. 12

Latest Market Intelligence.

LONDON OIL MARKET.

Supplied by Messrs. Benjamin & Gee, 31, St. Mary Axe, E.C.

February 28th, 1908.

Petroleum, with the exception of the Roumanian quality, has dropped a farthing in price since our last report, the latest quotations being:—Russian, $5\frac{7}{8}$ d. to 6d.; American, $6\frac{1}{2}$ d. to $6\frac{5}{8}$ d.; Water White, $7\frac{1}{2}$ d. to $7\frac{5}{8}$ d.; Roumanian, $6\frac{3}{4}$ d.

LUBRICATING OILS

are unchanged as follows :--

American pale, £7 7s. 6d. to £11.

American dark cylinder, from £9 2s. 6d.

American filtered cylinder, from £11 15s.

No. 1 Russian, £10 5s.

TURPENTINE.

American Turpentine has, as usual, had its ups and downs, and after having been very weak is now firm again, and is quoted for Spot 38s., and can be bought at practically the same price up to the end of the year.

LIVERPOOL OIL MARKET.

February 28th.

Refined oils are quiet, and sellers quote $6\frac{3}{4}$ d. for Russian, Galician or Roumanian; and $7\frac{1}{4}$ d. to $8\frac{1}{4}$ d. per gallon for American.

PETROLEUM SPIRIT continues at is. 0½d. to is. 3d. per gallon for American deodorised, according to quality on the spot.

LATEST AMERICAN PRICES.

NEW YORK, February 27th.

Refined, in cases, is steady at 10.90; Standard White, 8.75; Credit balances, 1.78c.

PHILADELPHIA, February 27th.

Standard White is still quoted at 8.70.

RUSSIA.

BAKU, February 24th.

The Baku oil market is firmer. Crude oil, spot, 26½ to 27 copecs per pood. Residuals, spot 27 copecs. Kerosene, in ships, delivery February-March, 32½ copecs.

BELGIUM.

ANTWERP, February 22nd.

The petroleum market is firm. Price of Standard White, spot, 22 francs per 100 kilos.

FRANCE.

PARIS, February 21st.

Illuminating oil is quoted in bulk, in whole tank waggons, 21 francs per hectolitre; spirit, 33·75 francs per hectolitre. Special white oil, in barrels or cans, 29 francs per hectolitre.

GERMANY.

HAMBURG, February 21st.

The kerosene market is quiet. The price of American Standard White is 7.55 marks per 50 kilos; Russian, 7.35 marks.

ROUMANIA.

February 16th.

Crude oil from different fields, including	Francs.
pipe line charges, per 100 kgs. ...	4'30-4'40
Refined oil, exclusive of taxes ...	6'00-6'50
Benzine, 717-720, including taxes ...	20'00
Benzine, 750-760	14'00
Residuals in tank waggons, at refinery ...	3'80-4'00
Paraffin	120'00-125'00

PRICES FOR EXPORT.

Refined oil in tank waggons, per 100 kgs.	6.50-7.00
Benzine, sp. gr. 0.710-0.715, f.o.b. ...	20.00-21.00
„ sp. gr. 0.715-0.720 „ ...	17.00-18.00
„ sp. gr. 0.730-0.740 „ ...	12.50-13.00
„ sp. gr. 0.745-0.755 „ ...	11.00-12.00

INDIA.

BOMBAY, February 7th.

Standard Oil Co., of New York.

Current rates are :—

American, "Snowflake," 150 deg.	..	..	..	Rs. 6	4	2
" Chester, 76 deg.	..	..	..	4	12	2
" Monkey Brand, 76 deg.	..	..	..	4	4	2
" Bulk, 125 deg. (in local made tins)	..	..	..	3	13	6
" " 125 deg. (8 Imperial gallons)	..	..	..	3	3	6

The Asiatic Petroleum Company, Limited.

Current rates are:—

Burmah oil, in tins, per pair	..	..	..	..	3	8	0
Russian "Rising Sun," bulk, per unit			3	6	0
" " " tins, per pair			4	0	0
"Anchor" per case	4	8	0

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IMPORTS of PETROLEUM into UNITED KINGDOM

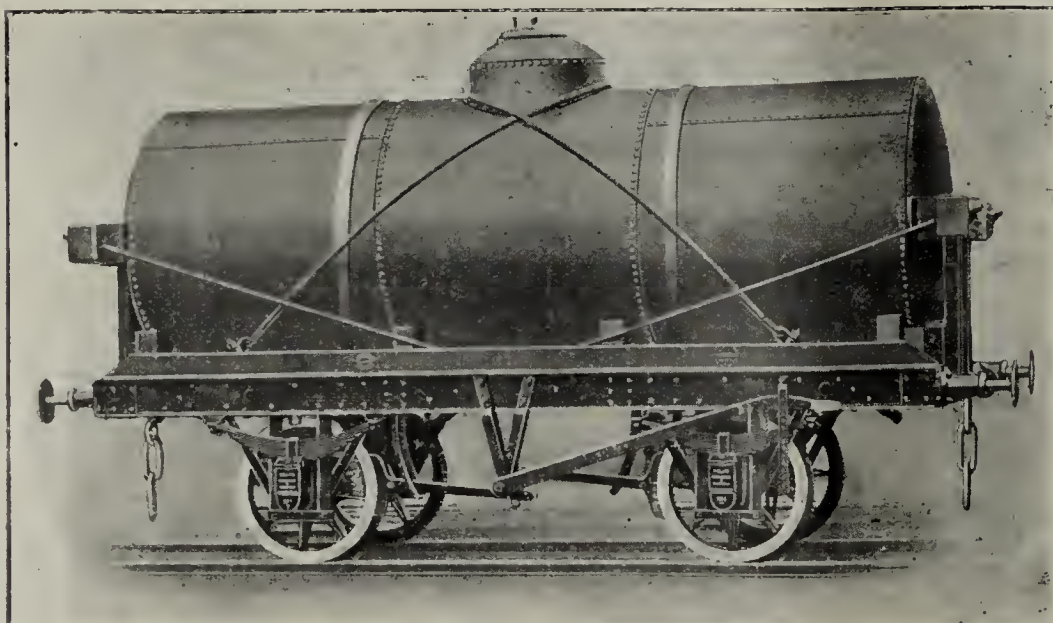
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FOR THE WEEK ENDED 17TH FEBRUARY, 1908—

DATE.	PORT AND IMPORTERS.	DESCRIP- TION.	NO. OF GALS.	PORT WHENCE.
Feb. LONDON—				
11	Leach and Co., Ltd.	Lub.	130	Ghent
11	Craven and Co.	"	40	Hamburg
12	Burt, Boulton and Heywood	Naph.	4,840	Terneuzen
12	Fielder, Hickman and Co.	Lub.	16,360	New York
12	Mordaunt Bros.	"	12,350	"
12	London and India Dock Co.	"	5,000	"
12	Anglo-American Oil Co.	Lamp	1,121,400	"
	(Iroquois)			
12	"	Gas	1,421,320	"
13	Mercantile Lighterage Co.	Lub.	4,250	"
13	Scott's Wharf	"	4,400	"
13	Schlieman's Oil Co.	"	7,500	Reval
13	Lubricating & Fuel Oils, Ltd.	"	737,250	Batoum
	(Oural)			
13	T. H. Lee	"	310	Hamburg
13	L. R. Grant	Spirit	40	Brussels
15	Craven and Co.	Lub.	250	Hamburg
17	London and India Docks Co.	"	1,720	"
17	T. H. Lee	"	610	"
17	Page, Son and East	"	560	Antwerp
17	Beck and Pollitzer	"	1,210	New York
17	Langley, Smith and Co.	"	2,400	"
LIVERPOOL—				
11	W. Gibson and Sons	Lamp	2,050	Boston
12	Stockdale and Doel	Lub.	2,800	"
12	Meade-King, Robinson & Co.	"	11,300	Baltimore
12	"	"	12,000	Philadel.
12	W. B. Dick and Co.	"	16,960	New York
12	"	Lamp	2,000	"
12	Geo. B. Taylor	Lub.	80,400	"
12	Vacuum Oil Co.	"	9,000	"
13	"	L. Comp.	1,740	"
15	Meade-King, Robinson & Co.	Lub.	82,240	Philadel.
17	G. B. Taylor	"	105,600	"
17	Bowring Petroleum Co.	"	1,480	"
17	W. B. Dick and Co.	"	15,180	"
17	Midland Railway	"	1,110	"
17	Worthington and Boler	"	2,940	"
17	Crew, Levick and Co.	"	50,130	"
17	"	M. Colza	9,080	"
17	Anglo-American Oil Co.	Lamp	662,190	"
	(Cuyahoga)			
17	Vacuum Oil Co.	Lub.	33,960	New York
17	W. and H. Jackson	"	200	Hamburg
BRISTOL—				
14	Pickfords, Ltd.	"	1,040	"
14	E. Stock and Sons	"	4,000	"
15	W. Smith and Co.	"	15,280	New York
15	H. R. James and Sons	"	2,000	"
17	Ford and Canning	"	300	"
17	H. Matthews and Co.	Lub. Gr.	120	Antwerp

DATE.	PORT AND IMPORTERS.	DESCRIP- TION.	NO. OF GALLS.	PORT WHENCE.
Feb. CARDIFF—				
15	Homelight Oil Co.	Lamp	459,000	Batoum
	(Bloomfield)			
GLOUCESTER—				
13	Bristol Steam Nav. Co.	Lub.	820	Hamburg
GRIMSBY—				
13	J. Sutcliffe and Son	"	160	Antwerp
13	"	"	320	"
HARWICH—				
13	D. Howard	"	630	"
13	"	"	240	"
13	"	"	190	"
HULL—				
13	Wilsons and N E. Railway Shipping Co.	"	1,240	Hamburg
13	"	"	1,600	Antwerp
MANCHESTER—				
13	D. Currie and Co.	"	2,280	Hamburg
13	Worthington and Boler	"	1,470	Philadel.
13	Manchester Liners	"	2,400	"
13	Meade-King, Robinson & Co.	"	36,000	"
13	"	M. Colza	9,000	"
13	Crew, Levick, and Co.	"	10,440	"
13	"	Lub.	16,910	"
13	C. H. Morton and Sons	"	1,400	"
13	Geo. B. Taylor	"	86,200	"
14	"	"	163,640	New York
15	Diamond Lubricating Co.	Lub. Gr.	2,000	"
15	Liverpool Storage Co.	Lub.	24,880	"
MIDDLESBRO'—				
17	E. Harris and Co.	"	240	Antwerp
NEWCASTLE—				
13	Tyne-Tees S.S. Co.	"	6,160	"
13	"	"	200	Hamburg
13	Furness, Withy and Co.	"	6,600	Baltimore
SWANSEA—				
13	Burgess and Co.	L. Paste	560	Hamburg
13	Richards, Turpin, and Co.	Lub.	2,000	New York
GLASGOW—				
11	Anchor Line	"	30,480	"
11	G. Cowper	Lub. Gr.	400	Philadel.
13	J. and A. Allan	Lub.	104,940	"
13	"	Lamp	11,250	"
13	Anchor Line	M. Colza	2,000	New York
13	"	Lub.	129,680	"
17	"	"	36,000	"
17	"	M. Colza	20,000	"

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— QUOTATIONS ON APPLICATION.

DATE.	PORT AND IMPORTERS.	DESCRIPTION.	NO. OF GALLS.	PORT WHENCE.
Feb.	GRANGEMOUTH—			
14	J. Currie and Co.	Lub.	2,000	Hamburg
14	W. Graham-Yooll and Co. . .	Lamp	4,000	"
14	"	"	4,000	"
	LEITH—			
11	W. Graham-Yooll and Co. . .	"	10,900	"
11	J. Currie and Co.	Lub.	940	"
13	"	"	150	"
13	W. Graham-Yooll and Co. . .	Lamp	3,490	"
17	J. Currie and Co.	Lub.	110	"
	BELFAST—			
13	G. Heyn and Sons	"	2,400	Riga
13	British Petroleum Co. (Aras)	Lamp	462,000	Philadel.
13	"	Gas	774,000	"
	Total for Week		6,952,360	

FOR THE WEEK ENDED 24TH FEBRUARY, 1908—

Feb.	LONDON—			
18	Fielder, Hickman and Co. . .	Lub.	9,000	New York
18	Mordaunt Bros.	"	8,200	"
18	Homelight Oil Co. (Bloomfield)	Lamp	515,850	Batoum
18	Schlieman's Oil Co.	Lub.	5,840	Reval
18	"	"	4,750	Hamburg
18	J. Harrison	"	200	Antwerp
18	Scott's Wharf	"	4,000	New York
20	Anglo-American Oil Co.	"	51,480	"
20	"	Lub. Gr.	620	Antwerp
20	Page, Son and East	Lub.	240	"
20	Schlieman's Oil Co.	"	4,200	Reval
20	"	"	4,200	"
20	Consolidated Petroleum Co. (Margaretha)	Lamp	746,000	Kustendje
20	British Petroleum Co. (Rocklight)	Gas	1,060,800	"
21	J. Harrison	Lub.	120	Antwerp
21	Beck and Pollitzer	"	940	New York
21	Mercantile Lighterage Co. ..	"	4,000	"
22	London and India Dock Co. ..	Lub. Gr.	180	Calcutta
24	"	Lub.	2,040	Hamburg
24	Page, Son and East	"	360	Antwerp
24	H. Finkler and Co.	Resid.	4,980	Trieste
31	Asiatic Petroleum Co. (Romany)	Benzine	1,484,450	Pulo Samboe and Arol Bay
	LIVERPOOL—			
13	American Line	Lub.	38,400	Philadel.
13	Meade-King, Robinson & Co. ..	"	7,800	Baltimore
13	Huxley and Co.	"	1,000	New York
13	Worthington and Boler	"	4,000	"
13	George B. Taylor	"	107,560	"
13	"	"	3,860	"
19	Uneco Asbestos Light Co.	"	120	Philadel.
19	Bramwell, Fern and Co.	"	620	"
19	E. H. Kellogg and Co.	"	120	Oporto
21	Pickford's, Ltd.	"	340	Hamburg
21	Schlieman's Oil Works	"	2,500	Baltimore
22	A. Hopps and Sons	Resid.	11,120	Newp't Nws.
24	Cunard Steamship Co.	Lub.	1,200	New York
24	E. H. Kellogg and Co.	"	800	"
24	Liverpool Storage Co.	"	53,800	"
24	"	M. Colza	16,000	"
24	Vacuum Oil Co.	Lub.	3,400	"
24	G. B. Taylor	"	400	"
24	J. Light and Son	"	3,000	"
24	W. B. Dick and Co.	"	14,000	"
24	R. Crooke, Jun.	"	2,200	"
24	Penwarden and Jackson	"	250	Antwerp
24	Meade-King, Robinson & Co. ..	"	1,402	Hamburg
	BRISTOL—			
18	Pickfords	"	450	"
18	"	"	230	Antwerp
18	W. Smith and Co.	"	15,720	New York
18	"	Lamp	6,000	"
20	H. Pritchard and Co.	Lub.	4,680	"
20	H. R. James and Sons	"	21,540	"
20	E. Stock and Sons	Lub. Gr.	80	Hamburg
	CARDIFF—			
21	Vacuum Oil Co.	Lub.	3,720	New York
22	Cardiff Colliery Supply Co. ..	"	2,220	"
22	Arnott and Co.	"	4,960	"
22	Collins and Co.	"	1,880	"
22	Goodall, Simpson and Co. ..	"	1,000	"
	GLOUCESTER—			
20	Bristol Steam Nav. Co.	"	1,000	Antwerp
	GRIMSBY—			
20	J. Sutcliffe and Son	"	160	"
	HARTLEPOOL—			
20	W. Hartlep'l Steam Nav. Co. ..	L. Paste	80	Hamburg

DATE.	PORT AND IMPORTER.	DESCRIPTION.	NO. OF GALLS.	PORT WHENCE.
Feb.	HULL—			
18	Wilsens and N.E. Railway Shipping Co.	Lub.	160	Antwerp
18	"	Benzoline	280	Dunkirk
18	Thos. Wilson, Sons and Co. ..	Lub.	9,320	New York
18	"	"	1,000	"
20	Mordaunt Bros.	"	6,200	"
20	Wilsens and N.E. Railway Shipping Co.	"	10,400	Hamburg
20	Wilsens and N.E. Railway Shipping Co.	"	120	"
20	"	"	8,000	Antwerp
21	"	"	320	"
21	Hull & Netherlands S.S. Co. ..	"	440	Rotterdam
	MANCHESTER—			
20	Anglo-American Oil Co. (Cuyahoga)	Lamp	918,390	Philadel.
20	Homelight Oil Co. (Bloomfield)	"	629,570	Batoum
20	Worthington and Boler	Lub.	1,470	Philadel.
20	Meade-King, Robinson & Co. ..	Lamp	40	"
20	D. Currie and Co.	Lub.	720	Hamburg
20	F. Pearson	"	310	"
	MIDDLESBRO'—			
22	E. Harris and Co.	"	280	Antwerp
	NEWCASTLE—			
18	Tyne-Tees Steamship Co.	"	1,720	"
20	"	"	240	Hamburg
	NEWPORT—			
20	J. O. Dibble and Co.	"	2,000	New York
	SWANSEA—			
20	Bristol Steam Navigation Co. ..	"	240	Antwerp
	DUNDEE—			
18	D. Alexander and Sons	Lamp	240	Hamburg
	GLASGOW—			
22	Burrell and Son	Resid.	4,000	Fiume
	GRANGEMOUTH—			
20	W. Graham-Yooll and Co. . .	Lamp	7,200	Hamburg
20	J. Currie and Co.	Lub.	550	"
	LEITH—			
18	G. Gibson and Co.	"	230	Antwerp
22	"	"	320	"
22	W. Graham-Yooll and Co. ..	Lamp	5,230	Hamburg
	Total for Week		5,859,030	
	Total for the Fortnight		12,811,390	

ENGLISH PATENTS.

(Specially contributed by Messrs. EDWARD EVANS & Co., Consulting Engineers, Chartered Patent Agents, and Enrolled Patent Attorneys, of the United States, of 27, Chancery Lane, London, W.C.)

APPLICATION FILED IN GREAT BRITAIN.

Improvements in Apparatus for Purifying Waste Oils.—Johan Adolf Nordström, 56, Ludgate Hill, London. No. 1941 of 1908.

APPLICATION PUBLISHED IN GREAT BRITAIN.

Improvements in Refining Crude Petroleum and other Hydrocarbons by Distillation.—Wallace McMullen, of 15, Tressillian Crescent, Brockley, London. No. 21060 of 1907.

This relates to a process for refining crude oil, consisting in the combined treatment of heating the crude oil in a still to temperatures well below those at which the desired constituents of the crude oil will respectively distil under the influence of heat alone; blowing or otherwise passing air at a temperature substantially that of the atmosphere or substantially lower than that of the crude oil and in abundant quantity through, so as to evenly air-wash the thus heated crude oil to effect the distillation of the light constituents; blowing or otherwise passing an inert gas or gaseous mixture containing no or only a small proportion of free or uncombined oxygen and at a temperature substantially that of the atmosphere or substantially lower than that of the crude oil and in abundant quantity through, so as to evenly gas-wash the thus heated and partly refined crude oil to effect the distillation of the heavy constituents, and employing the air or inert gas or gaseous mixture respectively thus used to carry the respectively resulting oil vapours from the still and through water, oil or other suitable separating and condensing means by which the oil vapours are separated from the air and from the inert gas or gaseous mixture respectively, and are condensed.

The Petroleum Review.

By PAUL DVORKOVITZ.

Vol. XVIII. (New Series.)

MARCH 14TH, 1908.

No. 420.

THE PETROLEUM REVIEW:

The ANNUAL SUBSCRIPTION for both English and Foreign readers is 26s., including Postage. Single Copies may be had at the offices at 1s.

The Editor would esteem it a favour if readers, when communicating with the various firms advertising in our pages, would mention the "Review."

Contributions upon items of interest are always welcomed from subscribers, but in each case these should be accompanied with the name and address of the sender, not necessarily for publication.

Editorial Notes.

The Unrest in the Shipbuilding Industry.

The unrest which is at present prevalent among those engaged in the British shipbuilding yards is quite typical of the English worker, who seems to choose the most inopportune time for remedying any grievances which he may have. The result of the disturbance is directly felt in the petroleum trade, for it means that work upon the score or so new oil tankers which at present stand on the stocks, partially completed, has been postponed indefinitely. Consequently the new oil tankers which one had hoped to see in active service during the present summer, stand but poor chance of leaving the building yards for several months to come. The Anglo-American Oil Company's new boats now being built by Messrs. W. Gray and Co. and Messrs. Napier and Napier will be somewhat put back in delivery, while Messrs. Lane and Macandrew's new tankers will likewise have to experience considerable delay in launching. Messrs. C. T. Bowring, too, who are expecting delivery shortly of two tankers from the respective yards of Messrs. Armstrong, Whitworth and Co. and Messrs. Swan, Hunter and Co. have to put up with disappointment, while the boats under construction for Messrs. J. M. Lennard and Son, Messrs. Hunting and Son, the Pure Oil Co., Messrs. H. E. Moss, the Homelight Oil Co., and Messrs. Balfour, Williamson and Co. are all being delayed by the unfortunate unrest among the workers. What the petroleum trade will suffer through these totally unnecessary strikes it is impossible to tell, but with the present shortage of tankers for charter, it is clear that the loss will be not only very considerable, when looked at from a monetary point of view, but extremely aggravating.

**Is No Help
Nigh?** Like a derelict craft at sea, left to the mercy of the waves, is the Baku Russian Petroleum Co., Ltd. One by one the directors, recognising no doubt that they were absolutely powerless, have dissociated themselves from control, and Col. Ivor Philipps, M.P., who all

along with something like soldierly brag, has told the shareholders that he would not readily give up his charge, has released the helm, and without even calling the shareholders together, has given over the position to another gentleman, who is now the receiver for the debenture holders. One would have thought that the only straightforward way would have been to have put the whole body of shareholders in full possession of the facts, and that once and for all a clean breast would have been made of the whole affair, however distasteful it might be to those who have meddled and muddled with the control in such a manner. The shareholders' committee have this week issued a circular to the unfortunate holders of stock, and at the same time have challenged those in authority to call a general meeting of the company. Something it is certain must shortly be done, for if no help is nigh, the derelict craft will most assuredly founder. Rumour has it that financial proposals are in the air. If so, then the shareholders should be apprised without delay as to their nature, for the present prevailing mystery is anything but reassuring.

**The American
Export Boom.** Though during 1907 the American petroleum export trade passed through various vicissitudes, it is already apparent that, if it remains free from Government interference, the volume of trade in this direction will materially increase during the present year. Judging by the various shipments for February, it would seem that the American petroleum export trade is in a decidedly healthy condition, yet in this respect the exact figures are not so far available. It is possible, however, by glancing through the statistics of the exports for the first month of this year, published upon another page, to see the great advance which was recorded during January in this branch of commerce. Not only were the total shipments over 20,000,000 gallons more than was the case for January of last year, but the value was increased to a still greater degree, the total value of the export trade being approximately \$2,000,000 more than was the total export petroleum values for the same period a year ago. The export movement of petroleum products in America is certainly experiencing a boom at the present time, which gives every promise of continuing, if only allowed a fair field.

**An Important
Move by
Messrs. Nobel Bros.** Volga shipping circles are greatly perturbed by a recent decision of Messrs. Nobel Bros. which amounts to a refusal to give the transport of their oils to the shipowners. Mr. Skvortzoff, the local representative of Messrs. Nobel Bros., has communicated the views of his firm to the *Sudochodetz*, the organ of the Volga shipping trade. From these it appears that the step was carefully weighed and considered by the firm before final adoption, and the firm's decision is based on

accurate commercial calculations. Like other commercial firms, they do not pretend to be public benefactors, and they have adopted the new system as the one most advantageous and convenient for them, and this is to be brought into practice during the coming navigation. It is interesting to note the facts which have led up to the recent decision. The firm, as is well known, have not only produced oil from their own wells, but have bought crude oil from other producers. In previous years they have been compelled to adopt this course of action, inasmuch as they were bound by large liquid fuel contracts. Now, however, the contracts have practically all been carried out, and generally the demand for liquid fuel has fallen off, so the moment has arrived when Messrs. Nobel can satisfy their requirements with their own production of crude oil. This amounts to 60,000,000 poods per annum, and after deducting the oil used at Baku and the quantity taken up by export, there is left about 40,000,000 poods for shipment to the Volga, the largest part of which Messrs. Nobel Bros. can transport in their own vessels. As we say, the shippers are greatly troubled over this latest move on behalf of Messrs. Nobel Bros., yet under the circumstances, such a move as that now taken seems to have been inevitable.

AN INTERESTING LITTLE PUBLICATION.

There has recently been published from the offices of that go ahead petroleum organ, the *Oil Investors' Journal*, a very useful publication known as the "Dope Book." Its contents deal fully with the Oklahoma-Texas-Louisiana oil statistics for the past year, while special data is included referring to the trunk pipe lines in those productive American fields. The forty pages are crammed with very interesting figures, mainly reproduced from actual records, and we must congratulate Mr. Holland S. Reavis, the editor of the *Journal*, upon the energy which he has displayed in compiling such an instructive handbook.

THE NEW TANKER "BUYO MARU."

The large oil tank steamer "Buyo Maru" has recently been completed on the Tyne for Japanese owners. She has been built by Messrs. Sir W. G. Armstrong, Whitworth and Co., to the order of Messrs. H. E. Moss and Co., of Liverpool. Messrs. Moss and Co. subsequently sold the "Buyo Maru" to the Toyo Kisen Kaisha, of Tokio, and she is the second vessel of her class to be sold by this well-known Liverpool firm to the same company. The new tank steamer will be employed by her owners in carrying oil from California to Japan.

Her leading dimensions are 398 feet by 50 feet 6 inches, and she carries a total deadweight of 7,100 tons on a moderate draught. She is built upon Swan's system for the carriage of liquid cargoes, whereby the variation in volume due to temperature change is absorbed within a specially proportioned expansion tank, which is so designed as to allow of a wide range of deadweight and trim.

LONDON OIL SHARE MARKET.

FRIDAY, MARCH 13TH, 1908.

Business continues to be on the smallest possible dimensions in the Oil Share Group of the London Stock Exchange, and there are few alterations to report from the prices quoted in our last issue. It was hoped that the further reduction in the Bank Rate to $3\frac{1}{2}$ per cent. (on March 5th) would prove an incentive to the investing public, but at present American Railroads are the only branch in which improvements are recorded.

Prices current on Saturday, the 29th ult., were as follows:—

Anglo-Russian Petroleum $\frac{1}{16}$ - $\frac{1}{8}$, Assam Oil, Ltd., $\frac{1}{2}$ - $\frac{5}{8}$, Baku Ordinary 6d. to 1s., Baku Preference $\frac{1}{8}$ - $\frac{3}{16}$, Californian Oilfields $5\frac{5}{8}$ - $5\frac{7}{8}$, Californian Five Per Cent. First Mortgage Debentures 96-99, Californian Refineries $\frac{1}{4}$ - $\frac{3}{4}$, European Petroleum $\frac{1}{16}$ - $\frac{3}{16}$, European Six Per Cent. First Mortgage Debentures 70-74, European Six Per Cent. Second Mortgage Debentures 35-38, Russian Ordinary 2s. 6d. to 3s. 6d., Russian Six and a-half Per Cent. Preference 4s. to 5s., Russian Five and a-half Per Cent. Debentures 76-79, Russian Six Per Cent. "B" Debentures 45-50, Schibaieff Petroleum 3s. 6d. to 4s. 6d., Schibaieff Preference $1\frac{1}{4}$ - $1\frac{1}{2}$, Spies Petroleum, $\frac{1}{32}$ - $\frac{1}{16}$, Shell Transport Ordinary 45s. to 46s., Shell Transport Preference 10-10 $\frac{1}{2}$.

The first alteration to report is a fall of 6d. in Shell Transport Ordinary on the following Monday at 44s. 6d. to 45s. 6d., while on the Wednesday Californian Oilfields improved $\frac{1}{8}$ to $5\frac{3}{4}$ -6. On Thursday, the 5th, Spies Petroleum were quoted $\frac{3}{8}$ - $\frac{7}{16}$, and on Tuesday, the 10th, Shell Transport Preference rose $\frac{1}{4}$ at 10 $\frac{1}{4}$ -10 $\frac{3}{4}$, at which price they remain firm, although the Ordinary have since declined another 3d. at 44s. 3d. to 45s. 3d.

Dealings for the New Account resulted in several alterations of a downward character, Baku Preference and Russian Preference being both weaker at $\frac{3}{32}$ - $\frac{5}{32}$ and $\frac{5}{32}$ - $\frac{7}{32}$ respectively, while the Five and a-half Debentures in the latter company were 1 per cent. lower at 75-78, Schibaieff issues were also easier, the Ordinary losing 6d. at 2s. to 3s., and the Preference $\frac{1}{8}$ at $1\frac{1}{8}$ - $1\frac{3}{8}$.

The only improvement was in Spies Petroleum, which recovered to $\frac{1}{32}$ - $\frac{1}{16}$ on the information of renewed production.

At the Mid-March Settlement, which commenced on the 11th inst., money was easy, but there was practically no account to be adjusted in Oil Shares. Unfortunately a comparison of the making-up prices fixed at the end of February fails to disclose a single improvement, while Californian Oilfields declined $\frac{1}{16}$ at $5\frac{7}{8}$, Schibaieff Ordinary at 6d. at $\frac{1}{8}$, and Russian Preference, Shell Transport Ordinary and Spies each lost 3d. at $\frac{3}{16}$, $2\frac{1}{4}$, and 8s. respectively.

No change occurred in either Anglo-Russian Petroleum at 1s., Baku Ordinary at 9d., Preference at $\frac{1}{8}$, Russian Ordinary at 3s., or Schibaieff Preference at $1\frac{1}{4}$.

ANOTHER NEW OIL TANKER ORDERED.

The Anglo-Saxon Petroleum Co., Ltd., are reported to have contracted with Messrs. Swan, Hunter and Wigam Richardson, Ltd., Newcastle, for an oil-tank steamer to carry about 6,000 tons d.w. and about 1,200 tons of bunkers. The engines, to indicate 2,500 h.p., are to be supplied by the Wallsend Slipway Co.

The Roumanian Petroleum Industry during 1907.

A DETAILED RETROSPECT.

(Concluded from page 121.)

With regard to the exports the total quantity of various petroleum products exported from Roumania during 1907 amounted to 423,638 tons, as against 321,119 tons in 1906, and 214,348 tons in 1905.

The exports of various products in 1907 as compared with those of 1906 were as under:—

	1907. Tons.	1906. Tons.
Crude, residuals, lubricating oil, etc.	77,779	53,374
Illuminating oil and distillate ..	260,295	196,631
Benzine.. .. .	85,564	71,114
Total	423,638	321,119

The increase in the total exports in 1907 against 1906 was 102,519 tons or 31·92 per cent. The exports of the various classes of products shew the following variations in 1907 against 1906:—Crude, residuals, gas oil, etc., an increase of 45·7 per cent.; illuminating oil, an increase of 32·4 per cent.; benzine, an increase of 20·3 per cent. On the whole, the progress is satisfactory and shews that Roumanian oil has now gained a permanent footing on the foreign markets.

The total exports to various countries in 1907 compared with 1906 were (in tons):—

		Crude, Gas Oil, Lubricating Oil, etc.		Illuminating Oil and Distillate.		Benzine.		Total.	
		1907.	1906.	1907.	1906.	1907.	1906.	1907.	1906.
France .. .. .	..	4,407	2,440	61,598	49,264	44,594	36,139	110,599	87,843
England .. .. .	..	35,076	25,400	23,372	52,274	6,130	13,588	64,578	91,262
India .. .. .	..	5,715	—	52,426	5,466	—	—	58,141	5,466
Germany .. .. .	..	888	1,939	15,593	15,665	30,710	20,436	47,551	38,040
Turkey .. .. .	..	1,027	1,010	31,696	21,482	77	32	32,800	22,524
Belgium .. .. .	..	2,397	832	25,663	7,112	—	—	28,060	7,944
Austria-Hungary ..	..	18,042	14,861	4,049	900	290	718	22,381	16,479
Italy.. .. .	..	6,267	46	12,570	34,123	2,735	37	21,572	34,206
Egypt .. .. .	..	—	—	20,872	—	—	—	20,872	—
Holland .. .. .	..	2,645	50	6,674	4,232	—	11	9,319	4,293
Bulgaria .. .. .	..	1, 67	1,202	1,000	2,106	847	140	3,114	3,448
Norway .. .. .	..	—	3,205	2,478	230	—	—	2,478	3,435
Tunis .. .. .	..	—	—	1,944	3,775	164	—	2,108	3,775
Argentina .. .. .	..	—	2,353	—	—	—	—	—	2,353
Greece .. .. .	..	4	—	—	—	2	—	6	—
Servia .. .. .	..	39	23	—	2	14	—	53	25
Switzerland .. ..	..	5	13	—	—	1	13	6	26
Total .. .. .	..	77,779	53,374	260,295	196,631	85,564	71,114	423,638	321,119

The largest importer of Roumanian oil during 1907 was France, which took 26·1 per cent. of the total export. Next follow: England with 15·2 per cent.; India, 13·6 per cent.; Germany, 11·2 per cent.; Turkey, 8 per cent.; Belgium, 6·6 per cent.

The most noteworthy fact to be gathered from the above figures is the very considerable quantities of oil exported by Roumania to the East, *i.e.*: India, Turkey and Egypt, which together took 111,813 tons of oil or 26½ per cent. of the total exports. The East is the natural outlet for Roumanian oil, and the trade there is bound to grow.

The routes by which Roumanian oil is exported are the Black Sea, the Danube, and the railways. The quantities exported through the principal ports and frontier stations were:—

	1907. Tons.	1906. Tons.
Constantza	348,590	247,292
Giurgiu	20,678	24,234
Predeal	19,882	15,802
Braila	15,919	25,074
Other places	18,569	8,716
Total	423,638	321,119

The above figures shew that the predominance of the Black Sea port of Constantza in the petroleum export trade continues to increase, whilst the Danube ports of Braila, Cernavoda and Giurgiu either remain stationary or even shew a decline. The oil shipped at Braila is exported through the Black Sea port of Sulina,

where the ships have to complete their cargoes. The oil shipped at Giurgiu goes chiefly to Regensburg on the Danube, in Southern Germany. Predeal is the frontier station through which chiefly crude oil is exported to Hungary for the Hungarian refiners.

The following table shews at a glance the progress made in every branch of the Roumanian petroleum industry during the last three years:—

	1905.	1906.	1907.	Increase in per ct. in 1907 against 1906.
Crude oil production ..	614,870	887,091	1,129,097	27·5
„ treated at re- fineries	510,143	748,798	950,614	27·0
Output of products—				
Benzine	78,182	114,428	146,263	27·9
Illuminating oil ..	153,499	221,683	261,684	18·0
Lubricating oils ..	17,255	53,588	57,337	7·0
Residuals	237,677	333,714	452,685	35·6
Home Consumption—				
Benzine	615	566	85,564	20·3
Illuminating oil ..	31,558	35,243	38,467	9·1
Lubricating oil ..	4,921	5,350	5,851	9·3
Residuals	162,243	237,477	332,999	40·2
Exports—				
Benzine	46,696	71,114	85,564	20·3
Illuminating oil and distillate	118,134	196,631	260,295	32·4
Crude, residuals, etc.	49,515	53,374	77,779	45·7
Stocks on 31st December—				
Benzine	20,084	18,275	47,506	160·0
Illuminating oil ..	30,144	48,967	36,128	decrease
Lubricating oil and residuals	64,452	67,334	67,816	0·7

The above figures shew steady and continuous

progress in every branch of the industry, which shews that the industry rests on solid foundations.

The total quantity of crude oil treated at the Roumanian refineries during 1907 amounted to 950,614 tons, against 748,798 tons in 1906. During the year the refineries were working regularly, as will be seen from the following figures giving the quantities of crude oil treated month by month:—

	Tons.		Tons.
January	52,632	July	90,951
February	57,890	August	89,599
March	75,537	September	90,196
April	80,936	October	86,311
May	85,196	November	87,125
June	75,803	December	78,438
Total	950,614		

The output of various products in 1907, compared to 1906, was as under:—

	1907. Tons.	1906. Tons.
Benzine	146,263	114,428
Illuminating oil	261,684	221,683
Lubricating oil	57,337	53,588
Residuals	452,685	333,714
Total	917,969	723,413

The yield of various products from the crude oil, in per cent., in 1907 against 1906 was:—

	1907.	1906.
Benzine	15.4	15.3
Illuminating oil	27.5	29.6
Lubricating oils	6.4	7.2
Residuals	47.2	44.5
Total products	96.5	96.6
Loss in distilling and refining	3.5	3.4

It is interesting to note from the above figures that whilst the yield of benzine from the crude oil has remained unchanged at 15 per cent. the yield of illuminating oil has gone down from 29½ to 27½ per cent., the output of lubricating and intermediate oils has also declined from 7.2 to 6.4 per cent., but residuals, on the other hand, have increased from 44.5 to 47.2 per cent. This is due to the increased demand for liquid fuel in Roumania. Although the proper and rational utilisation of petroleum is in the form of products and not as residuals, nevertheless the increased use of liquid fuel is a satisfactory sign inasmuch as by possessing a safe home market for a large part of its production the industry gains in stability by being less dependent upon the changing conditions of the trade on foreign markets.

The bulk of the refining industry is concentrated in the Prahova district within easy reach of the oil wells. Out of a total quantity of crude oil refined, 88.3 per cent. was treated in the Prahova district, 5.9 per cent. in the Dambovitza district, 4.5 per cent. in the Constantza district, and 1.3 per cent. in the rest of Roumania. Although the concentration of refineries at the ports of shipment offers certain advantages for the export trade, yet in their present state the Roumanian railways would not be able to ensure the regular transport of the crude oil from the wells to refineries, and therefore the refineries have to be concentrated near the place of production of the crude oil.

MOTOR MATTERS.

THE arrangements already announced for a B.M.B.C. club house at the forthcoming Motor Boat Exhibition, at Olympia, are now complete; a space in the annexe of 500 square feet has been secured. A bungalow type of building will be erected by Messrs. Boulton and Paul, of Norwich, who make a speciality of temporary buildings of this nature.

— * —

MR. O. B. COLLS' "Fleurette II." is to be launched this week. A speed of 17 knots is anticipated by her owner.

— * —

DURING 1907, England imported from France motor cars to the value of £2,416,480, or over 40 per cent. of France's total exports in this direction. Great Britain is still by far the largest market for the French manufacturers.

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THE latest addition to the already long list of non-slipping tyre covers is called the Palladium. The hardened rivets are not flat on the heads, but are slightly concave, and it is claimed that on account of this the life of the rivets is prolonged by the layer of ground that becomes embedded. The sole agent for Great Britain is Mr. C. R. Merton, of the Warwick Motor Works, Warwick Place, Paddington, W.

— * —

AN exceedingly simple device has recently been put on the market by the Motor Accessories Co., of 55, Great Marlborough Street, W., which serves the very useful purpose of indicating when the tail light is accidentally extinguished. The apparatus can be fitted without any special tools, and should immediately become popular.

— * —

ALL motorists are under a debt of gratitude to Messrs. J. E. Hutton, Ltd., of Shaftesbury Avenue, W., for a very convenient catalogue dealing with tyres and tyre sundries. A great amount of valuable information has been included in the book which will be sent post free to all applicants.

— * —

THE annual general meeting of the Royal Automobile Club was held on Thursday last at the club's new headquarters in Pall Mall. These, it may be remembered, were formerly occupied by the War Office.

— * —

THE new works erected by Humber's, at Coventry, are now virtually completed, an influential company being shewn over them on Thursday last.

— * —

WE learn from the Secretary that from the number of enquiries and entries already received, the Open Flexibility Competition of the Crystal Palace A.C. promises to be highly successful.

— * —

MOTOR taxation and necessary parliamentary reforms are two matters which will come up for discussion at a general conference of automobilists to be held in London on the 25th inst.

— * —

MESSRS. J. B. BROOKS AND CO., LTD., Great Charles Street, Birmingham, are at present making a general clearance sale in non-skid and puncture proof tyres. Prices have been materially reduced, and this should add to the popularity of these well-known tyres.

— * —

DURING the first two months of this year there were 4,000,000 gallons of motor spirit imported into this kingdom. The amount is somewhat below the total for the first eight weeks of last year.

— * —

AMONGST the exhibits at Olympia, one that will attract more than ordinary attention will be that of Sturmeys Motors, Ltd., of the Lotus Works, Coventry. This firm have, for some time now, been concentrating their attention upon the production of a light delivery van, a vehicle designed and built throughout as a commercial vehicle, that is to say, with the especial work in view of carrying dead loads on solid tyres, and not in any sense the mere adaptation of a pleasure car chassis, or the interchange of van and pleasure bodies on such chassis.

A Tribute to the Late Prof. M. Konvaloff.

By DR. P. DVORKOVITZ.

With great regret I have to record the death of my late colleague—Prof. Michael Konvaloff—whose life's work in the laboratory with investigations into the true character and constituents of petroleum hydrocarbons will be perused with keen interest by generations yet unborn. The story of his life is full of romance—such as is but seldom encountered. The son of a peasant, he early evinced a great liking for deep study, and it was this which led his widowed mother to take him on foot almost a hundred miles in an earnest endeavour to get him taken into one of the Russian colleges. Lacking sometimes almost the bare necessities, the early career of Michael Konvaloff was one in which his ambition received but very scant encouragement, and it was not until one of the examiners at one of the Universities took a kindly interest in the young and unlearned scientist that his brilliant future saw its dawn. Step by step he plodded along until he became one of my colleagues as assistant at the University of Moscow to the late Prof. Markovnikoff, and here it was that his great desire of life—to investigate and define the composition of Caucasian petroleum—found full vent.

After a long series of experiments extending over several years, Prof. Markovnikoff came to certain conclusions as to the character and chemical constituents of Russian petroleum, and defined the hydrocarbons in that petroleum as a close chain, giving them the name of naphthenes. First as pupil of, and afterwards as assistant to, Prof. Markovnikoff, Michael Konvaloff continued the experiments on practically the same lines, but went a step further than his learned chief by means of producing nitro-products from Russian petroleum hydrocarbons, coming to the conclusion exactly opposite to that at which Prof. Markovnikoff arrived. So convincing were these results that Prof. Markovnikoff has had to accept them and correct his own views as to the character of Baku petroleum hydrocarbons, for almost all the researches at the University of Moscow for a period of 15 years were chiefly in connection with the investigation of Baku petroleum constituents.

It is unnecessary for me here to refer at length to these investigations in connection with which Prof. Konvaloff has been prominent, but it is certain that his researches have opened a wide field for the scientists all over the world with regard to the nitrofication of saturated hydrocarbons, and especially those of petroleum.

During 1885 and the two following years which I spent at the Moscow University working alongside Prof. Konvaloff, and in fact living in the same rooms as he occupied at the university, I have been able to study the remarkable capacity for arduous work which Prof. Konvaloff even then displayed. His influence in the conduct of the students' work in the special branch of organic chemistry was remarkable, and the result is that to-day we see many of those old students occupying the highest positions in the management of the technical enterprises throughout Russia, while a great many of them have devoted, and are still devoting, their lives in following up the scientific researches of the various hydrocarbons of Russian petroleum.

Every scientist who has devoted his energy to such researches knows full well the great amount of self-sacrifice which has to be displayed, and the many weary months which have to be spent in continuous hard labour before it is possible to prepare even a small quantity of a so-called chemically pure and stable product from petroleum which is a mixture of hydrocarbon compounds so closely associated with each other in their physical and chemical character. In fact, it is with the utmost difficulty that these compounds are separated into their pure state. I well remember that Prof. Konvaloff has had to distil and re-distil certain fractions of petroleum even 60 times before he has obtained a very small product with a constant boiling point and a constant specific gravity, and

a man with less energy than he would have felt many times inclined to abandon such a laborious task. Owing, however, to the persistence which he displayed in this direction he has succeeded—even after years of research—in discovering the true character of Russian oils, and it has been his great regret that he had not the time in which to make similar deep investigations into the constituents of the petroleum of other countries.

His whole life was spent in carrying out these investigations, and though his removal creates a void in the ranks of Russian professors who have made a study of the chemical and physical character of petroleum hydrocarbons, his works will be of undying interest and value to all future students. The news of the death of Prof. Konvaloff comes to me as a blow, and my regret will be shared by all who have the true welfare of the industry at heart.



THE LATE PROF. M. KONVALOFF.

THE DETERMINATION OF THE BOILING POINTS OF PETROLEUM.

The distillation test of benzine and illuminating oils, according to the decision of the Third International Petroleum Congress, has to be carried out with the apparatus, constructed by Dr. Uebbelohde, the description of which given below is taken from the Bulletins of the Official Bureau for Testing Materials, at Gross Lichterfelde, Berlin.

In contradistinction to the formerly used intermittent distillation method the standard apparatus will distil continuously, whereby the time taken for the test will be reduced (total duration, 20 minutes), and the agreeing of the repeat tests will be better.

The distillation flask is connected with a descending condenser, the gradient of which is precisely laid down (75°).

The flask is sunk into the upper aperture of the stove and is heated by means of a burner, in which the simultaneous admission of gas and air is nicely regulated. The Stove as well as the protecting cover surrounding the flask, serve to keep the air-draft away from the burner and flask, so that the rapidity of distillation should throughout the duration of the distillation remain even.

The rapidity of distillation shall amount precisely to two drops per second, and in order to easily regulate this, a pendulum is attached, which moves in half seconds. Regulating of the rapidity of distillation is only possible with the above described appliances (regulating lock, stove, etc.); it must be exact, as it strongly influences the results. It is also necessary that the prescribed measurements of the apparatus shall be precisely adhered to.

In the place of the measuring cylinders generally used for receiving the distillates divided cylinders are used, which are placed on a revolving stand, which in the case of very light flowing distillates can be placed in a water bath. The cylinder which is in use at a given time is moved up on the stand so that it encloses the end of the condenser tube and thus obviate any losses through evaporation.

The author describes in connection with this apparatus also comparative distillation with several other old apparatus, which shew that the results of the latter differ so much from those of the standard apparatus that they cannot be used for the purpose of testing.

Nothing further can be said in a brief note about this highly-interesting part of this excellent work.

THE OIL TRADE OF GOA.

The British Consul, in commenting upon the trade of Goa during the year 1906, says the bulk oil installations for storage of oil brought over-sea for re-importation to British India by the railway *via* the land frontier of Goa are to be largely increased. The storage and handling of this petroleum in foreign territory involves no loss to British industry, but, on the contrary, the advantages of the route have led to an increased demand for Burmah oil of cheap grades, and this oil has recently entirely supplanted the foreign oil which previously passed through these channels.

PETROLEUM IMPORTS INTO GERMANY DURING JANUARY.

The following are the quantities of various petroleum products imported into Germany in January, 1908:—

	Tons.
Illuminating oil	168,467
Lubricating oil	17,660
Crude benzine	8,146
Refined benzine	828
Crude oil	2,053
Gas oil	3,155
Residuals	127
Artificial turpentine, etc.	50
	200,486

The total imports from the various producing countries were:—

	Tons.
U.S.A.	157,385
Russia	13,198
Austria-Hungary	19,890
Dutch India	5,178
Roumania	3,842
Other countries	993
Total	200,486

The exports of various petroleum products from Germany, in January, were:—Illuminating oil, 90 tons; lubricating oils, 994 tons; benzine, 409 tons; residuals, 76 tons; total, 1,569 tons.

BATOU PETROLEUM SHIPMENTS.

The following were the shipments of petroleum products from Batoum during the week ended February 16th, o.s. (in poods):—

	Illuminating Oil.		Other Products.	
	1907.	1908.	1907.	1908.
To Europe ..	270,000	432,000	26,000	382,000
To the East ..	72,000	658,000	—	—
To Russian Ports.	1,000	113,000	3,000	1,000
From 30th Dec. to 16th Feb.:—				
To Europe ..	1,000,000	2,303,000	1,572,000	1,412,000
To the East ..	1,917,000	2,370,000	2,000	2,000
To Russian Ports	128,000	790,000	18,000	5,000

LATEST DEVELOPMENTS IN THE MEXICAN FIELDS.

From Mexico comes latest news in connection with the preparation of Messrs. Pearson and Son, Ltd., to enter the Mexican market with their petroleum products in competition with the various interests already established there. It appears that the company's operations around Minatitlan are now very active. The company has completed a pipe line 24 kilometres in length from the San Cristobal fields to the refinery at Minatitlan, where there is one 42,000 barrel tank filled with oil. There are also two tanks each holding similar quantities in the San Cristobal territory. The company is now exploring at Tuxpan and at the Tamiahua lagoon between Tampico and Tuxpan, and recently a well was brought in in each place with a capacity of 200 barrels per day. The company has also encountered a very good show of oil in the fields which are now being explored along the Tamesi river in the State of Tamaulipas.

THE ASPHALT DEPOSITS OF OKLAHOMA.

By Mr. CHARLES N. GOULD.

Writing with reference to the asphalt deposits of Oklahoma, Mr. C. N. Gould, Professor of Geology at the Oklahoma State University, says that the deposits are among the most extensive in the United States. The greater part of the deposits occur in the region south of the Arbuckle mountains, although exposures are found all the way from the Arkansas line to the Wichita mountains.

Practically all the asphalt in Oklahoma is found as rock asphalt; in other words, rock impregnated with asphalt. Pure asphalt or bitumen is derived from the distillation of petroleum or rock oil. In a few places in the world, as, for instance, on the island of Trinidad, the asphalt comes to the surface in great quantities and spreads out, forming a so-called lake. The evaporation on the surface forms a hard crust, but beneath the crust the asphalt is soft and viscous.

The asphalt of Oklahoma occurs along fault lines. A fault is a great crevice or fissure that cuts through the rocks and extends from the surface to a depth of sometimes many thousands of feet. Along this fissure the rocks have slipped up on one side and down on the other. At some unknown depth these faults or fissures have cut beds which carry the heavy petroleum, and this substance has come up along the fault line and has impregnated the rock on either side of the fissure.

If the rock happens to be a limestone the substance is called lime asphalt; if a sandstone, it is sand asphalt, and if shale, it is shale asphalt. So it will often happen that a bed of lime asphalt is just over a bed of sand asphalt, or *vice versa*. This condition is shewn in the sketch on this page, which illustrates a fault and the zone of impregnation.

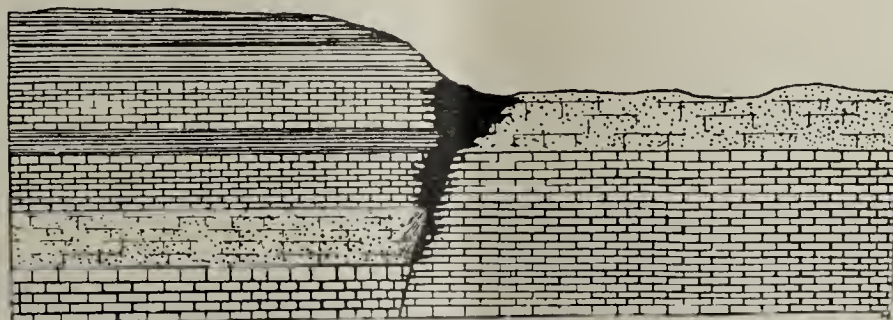
Analyses of the asphalt made by Professor De Barr, of the State University of Oklahoma, shew that the composition of the material varies considerably. The so-called lime asphalt contains all the way from 2 to 10 per cent. of hydrocarbon, the remainder being calcium carbonate or limestone. The sand asphalt runs usually from 10 to 25 per cent. of hydrocarbon. The shale asphalt usually contains less than 5 per cent. of hydrocarbon, and is not utilised. It is usually considered that a mixture of the lime and sand asphalt makes the best paving.

The thickness of the so-called veins on either side of the fault line varies from two or three feet to more than 50 feet. Usually the sandstone, which is rather porous rock, has been filled to a greater distance from the fissure than dense shale. Limestone is often impregnated with the material for a distance of 25 to 50 feet from the fault.

The faults often outcrop on the surface for a distance of a mile or more. The depth to which the fissures extend is unknown, but in some cases it is at least as much as 1,000 feet. When it is understood that several scores of the fault lines have already been discovered, and that new ones are coming to light all the time, it will be seen that the deposits are for practical purposes inexhaustible. It is no uncommon thing for a farmer breaking out new prairie to turn up a black rock and find that an asphalt vein crosses his field. Or perhaps a man digging postholes may throw up a piece of asphalt rock. No one knows how extensive the deposits are, but there need be no surprise if new beds are discovered for the next 100 years.

According to the terms of a treaty entered into between the Choctaw and Chickasaw Indians and the United States, all the known valuable coal and asphalt lands in both nations were segregated or set apart from allotment. The work was done by Mr. Joseph A. Taff, of the United States Geological Survey, in 1903 and 1904, at the same time that the coal was segregated. Mr. Taff

included in his segregation all the land containing asphalt that had been discovered up to that time, 7,240 acres in all, of which 6,880 acres had been leased by various companies and 360 acres were not leased. This land is included in 13 separate tracts, 12 of which are located in the



CONDITIONS UNDER WHICH ASPHALT IS FOUND.
An ideal section of a fault shewing zone of impregnation.

Chickasaw Nation and one in the Choctaw Nation. The size of the tracts varies from 40 to 960 acres each. According to the terms of the treaty the leased land, 6,880 acres, could not be sold without special act of Congress, so that only 360 acres of unleased asphalt land was on the market. Bids for this land were opened in August, 1906, but all were rejected by the Secretary of the Interior.

As has been said, since the time the land was segregated a number of additional deposits of asphalt have been discovered. The greater part of these are on allotted land, some of which can now be sold, and some of which will be on the market as soon as restrictions on the sale of land have been removed. Some of this land lies near railroads and some of it is 20 miles away from transportation.

At various times several of these different deposits have been worked. Quarries have been opened on practically all the leases, and several mills have been erected, one at Gilsonite, three miles south of Sulphur; one at Brunswick mine near Dougherty, and one at Ardmore. In some cases the rock was simply crushed fine, in other instances an attempt was made to distill out the asphalt from the rock matrix. At various times the rock has been used for paving in a number of

cities, such as Kansas City, Fort Worth and Ardmore.

The chief difficulties in the way of the profitable utilisation of the asphalt deposits of Oklahoma are as follows:—First the attitude of the asphalt trust. Following well-known methods, the trust has underbid independent operators and used either asphalt imported from Trinidad or a manufactured product derived from oil refineries. It is even claimed that practically all the leases in the Chickasaw Nation are now held by the asphalt trust. Second, the lack of economical methods of utilising the rock asphalt. The crushed rock is bulky and transportation charges prohibitive, and the methods of refining the product on the ground have not always been satisfactory. Third, the cost of transporting the raw product from the mines to the railroad. In spite of these objections, however, the fact remains that there are in Oklahoma vast deposits of asphalt, enough to last for untold generations.

THE TIN PLATE MARKET.

Messrs. Norton, Owen & Co., of 4, Bishopsgate Street Within, London, E.C., report under date March 12th, 1908, as follows:—

Enquiries have not been so numerous during the past fortnight, but as many of the large works are well booked for some months ahead, there is no appreciable alteration in prices, which remain at about the same level as last quoted, viz.:—

1C	18½ × 14	124 sheets	110 lbs.	12/6 to 12/9	per box.
1C	19½ × 14	120	„ 110	„ 12/6 to 12/9	„
1C	20 × 10	225	„ 156	„ 17/6 to 17/9	„

F.o.b. Wales. Tin lining and iron hooping extra.

Success at Mislisora.—Well No. 20 of the Trajan Co. at Mislisora has struck oil and, yields from 20 to 30 tons of oil per 24 hours.

From Coalinga.—The independent producers of the Coalinga field have decided to accept for their oil the same price as that received by the Kern River producers—from 60 to 63 cents per barrel. They have accordingly entered into a contract with the Associated Oil Co. to this effect. The daily output of oil amongst these producers is about 3,800 barrels daily.

Glenn Pool Statistics.—The statistics of the Glenn pool shew that the area of the proven field is about four miles square, comprising about 10,000 acres. The first well was drilled in November, 1905, and since that time the pool has produced about 28,000,000 barrels. At present there are 95 companies or firms operating in the field, and the total investment of capital is about \$20,000,000.

The Anse la Butte Field.—The new Louisiana district of Anse la Butte has failed to come up to the great expectations held out for it. During January only two wells were completed, and both of these were free of oil. The old wells, however, shew an increase in their yields—the total production from this district for January is estimated at 22,000 barrels, or 3,000 barrels more than in December.

January Pipe Line Report.—The runs of the Eastern pipe lines during January were the smallest on record since the memorable shut-down in 1887. The shortage in the supply of Pennsylvanian and Lima oil was, however, more than made good (says the *Oil City Derrick*) by the receipts from the Illinois and Mid-Continent yields, and stocks in the custody of the Eastern pipe lines increased at the rate of over 11,000 barrels per day.

THE SOUTHERN CALIFORNIAN OIL SYNDICATE, LIMITED.

MR. W. SHYVERS VISITS THE PROPERTY.

Mr. W. Shyvers, one of the directors of the Southern Californian Oil Syndicate, has recently returned to London after a visit to the property of the company (the Mahony ranch near Santa Ynez, Santa Barbara county) and surrounding territories.

Interviewed by our representative, Mr. Shyvers gave sundry particulars of his visit, which we think will interest our readers.

He stated that in company with Mr. H. J. Crocker, of San Francisco, he had visited the two wells on San Carlos de Jonata ranch now being drilled by that gentleman and his Californian friends, assisted largely by English capital. Mr. Crocker informed him that they considered the strata so far penetrated in those wells was very encouraging, and lead them to expect that they would ultimately find the oil they are seeking. He also visited the McCabe tract, near Lompoc, a few days after drilling had commenced thereon. It was generally expected that oil would be found on that property which forms part of the Pacific Oilfields, Ltd.

Since their own company was formed the Anglo-Californian Oil Syndicate, Ltd., of which Mr. Shyvers is a director, had commenced its well No. 2, now at a depth of 1,000 feet.

The first well of the Anglo-Californian Oil Syndicate, Ltd., when he last visited it, was at a depth of 2,100 feet. There had been a continued pressure of gas, and also various globules of oil had been noticed in the sump hole, the drillers being confident of finding oil.

Development work was now also very noticeable on the south side of the Santa Ynez river. Near Lompoc, close to the ocean, the Bear Creek Oil Co. was drilling a well which was at a depth of about 2,000 feet, in what was said to be a promising formation. Another company was being formed, called the Miguelito Oil Co., whilst the Crocker-Japanese combination had given it out officially that it proposed to begin drilling immediately on the La Cruces ranch.

More important, however, from their own company's point of view, were the developments, in actual progress, surrounding the Mahony property. He found that work was being done quite near them, and having, therefore, an extremely important bearing on their property. Their most immediate neighbours, the Commercial Bank of Santa Barbara, owners of the property adjoining theirs, had leased their land to a company called the San Lucas Oil Co., financed by Californian and Japanese capital. He visited that property, and found the derrick and boiler already in place, near the river, together with some casing on the ground. The San Lucas Oil Co. was the concern to whose approaching organisation reference was made at their company's first general meeting, and Mr. H. J. Crocker and Japanese capitalists connected with the Toyo Kisen Kaisa (Imperial Japanese and U.S. Mail Line), identified themselves with that company with the result that development work would be prosecuted vigorously.

Whilst he was at Santa Ynez he was informed that land had been leased, and drilling would shortly commence upon a portion of the Najoqui ranch, owned by Mr. De la Cuesta, on the same side of the river as the Mahony ranch, and those operations were quite near enough to do good work in the direction of proving their own territory.

Naturally Mr. Shyvers was not in a position to discuss his own company's plans, but, generally speaking, he was very pleased with the result of his visit.

THE INFLUENCE OF METHODS OF DISTILLATION ON THE YIELD AND QUALITY OF DISTILLATES.

By MR. A. GUISELIN.

TRANSLATED FROM THE . . .
Moniteur du Petrole Roumain.

Industrial distillations may be continuous or intermittent and for each of these operations different methods of heating may be employed, *i.e.*, either direct fire, steam, superheated steam, etc., and finally in some cases, in order to assist the distillation, the pressure above the liquid is diminished.

Intermittent distillations are those which are made in the same vessel without the adding of fresh crude material in course of the distillation. These methods permit of the most rational and most energetic separation of the various constituents of the liquid distilled.

Continuous distillation can be made in one or more stills; the products distilled over are continuously replaced by the crude material to distil. When one still only is used the distillation has to be stopped when the still becomes full of the distillate. When the distillation is carried out in a battery of stills arranged in a cascade, the residue naturally flows to the extreme end of the battery.

The distillation can be produced by heat from widely different sources. It may be obtained either by burning coal on grates in inside or outside furnaces; by burning tar or residuals injected or pulverised under the still by means of steam or compressed air, and lastly, by using special apparatus, burn the permanent gases produced in course of the distillation of heavy oils and the gas produced by gas generators such as are in use in certain French refineries. In France the methods of distillation in use have not changed for the last 25 years, and in the new refineries just established we find again the enormous American still, a great consumer of fuel and constructed specially for working with American crude oils.

By force of habit the refiners continue to distil in American stills, destined for American crude oil, Roumanian and Russian distillates. During the last few years, however, superheated steam is used to assist in the distillation of the last-mentioned distillates.

I do not intend to describe in this article all the distilling methods in use. This has probably already been done before more completely than I could do it. I shall refer to it if I can think that such an *exposé* will cause the French refiners to reflect a little on the advantages which they might derive from the use of continuous stills, especially for the distillation of Roumanian and Galician oils, but for the moment I prefer to leave the constructors to speak of this.

Since, in France, we are condemned to routine I shall speak simply of the influence which the method of heating can have on the distillation of products sensible to the action of heat such as American and Galician crude oils, *i.e.*, paraffinous oils in general.

For the purpose of my experiments, I took the Pennsylvanian crude oil imported into France. By submitting an equal quantity of this oil to distillation in the same still, but, working by different methods, I have

obtained in each case 20 fractions of different gravities.

The first distillation was carried out by the ordinary method with direct fire, in 20 parts divided according to volume. Beginning from the cracking part, *i.e.*, the 13th fraction, the distillation was carried on very slowly.

The second distillation was carried out likewise by direct fire, also in 20 fractions by volume, but very slowly from the beginning, in order to obtain a good separation of fractions, and more rapidly after the thirteenth fraction in order to avoid decomposition.

Other distillations were carried out by a very small outside heat by using superheated steam and a vacuum (1) pushing the distillation up to dryness and (2) stopping the distillation on a residue representing 15 or 16 per cent. volume of the crude oil. The results of these distillations are very much alike up to the third fraction, beginning from which the difference in the gravities of the corresponding fractions grows steadily. The differences are greatest when the thirteenth fraction has been reached. Beginning from that point the products of the slow distillation by direct fire become very irregular; an abundant quantity of gas is produced, and the oils distilling over become inflammable.

When the distillation is pushed on more rapidly, the decomposition is less pronounced; the output of gas is less, and, most remarkably, the oils obtained are much richer in paraffin. In France, where little paraffin is extracted, this is a drawback, and the refiners find it to their advantage to adopt the slow process, as the latter produces light oils and destroys the paraffin, which is prejudicial to the good quality of the illuminating oils.

The third distillation was carried on with direct fire up to the tenth fraction. Beginning from that point, I introduced into the still progressively (in quantity and extent of superheating), superheated steam from 190° to 290° without increasing the source of external heat. Finally, I produced in the interior of the still a depression of from 39 to 40 cm. of mercury by means of a vacuum. I have thus succeeded, by maintaining this depression almost constant, to distil till dryness, and obtain a series of fractions increasing in gravity up to the seventeenth fraction. At that point the source of external heat had to be increased, and the products, which when they were distilled over were red, rapidly turned brown in the air, and were all easily inflammable, whilst for the preceding fractions the inflammability was as under:—

			Spec. Gravity		
			at 15° C.	Inflammability.	
Fraction No.	11 ..	..	0.815	..	105°
„	No. 12 ..	..	0.825	..	120°
„	No. 13 ..	..	0.835	..	130°
„	No. 14 ..	..	0.843	..	155°
„	No. 15 ..	..	0.853	..	165°
„	No. 16 ..	..	0.863	..	180°
„	No. 17 ..	..	0.875	..	180°
„	No. 18 ..	..	0.878	..	180°

All these fractions were very paraffinous and solidified above + 18°.

The fourth distillation, whilst operated under the same conditions as the one previously described, was stopped at a residue of 15 to 16 per cent. The distillation was not stopped all at once, but in succession—the external fire was extinguished, the vacuum was removed, but the steam continued to be admitted, the temperature of it being gradually reduced, in order to eliminate the products of decomposition which might have been formed, thanks to the very high temperature of the residue. The residue, after being cooled, was found to be of very nice appearance; had a specific gravity of 0.897 at 15° C. and a flash point of 210° C. The viscosity, measured by the Barber ixometer, was found to be as follows:—

At 15° C. ..	0°	....	At 75° C. ..	88°
„ 35° C. ..	12°	....	„ 100° C. ..	210°
„ 50° C. ..	27°	....	

This residue, when freed from paraffin, forms an excellent lubricating oil, after filtration through clay or animal charcoal.

Refining with acid is not easy without the aid of volatile solvents, and is not commercially practicable.

Below is a summary of results obtained by the two methods of distillation (1) with direct fire and very slow distillation, and (2) with superheated steam and vacuum, *i.e.*, under the most widely different conditions :—

Comparative yield of first distillation.	Slow distillation with direct fire.		Distillation with superheated steam and pressure reduced to 40cm. of mercury, up to a residue of 15%.	
	Per cent.		Per cent.	
From beginning to a specific gravity of 0.740 (light spirit)	15	..	15	
From 0.740 to 0.770 (heavy spirit) ..	15	..	13	
From 0.770 to 825 (illuminating oil, by direct fire)	35	..	—	
0.770 to 0.830 (illuminating oil with superheated steam and vacuum) ..	—	..	34	
Heavy oils, with cracking (by direct fire)	32	..	—	
Heavy oils, without cracking (with superheated steam and vacuum) ..	—	..	22	
Residuals, suitable for lubricating oil manufacture	—	..	15	
Coke (by direct fire)	1.25	..	—	
Loss in distilling	1.25	..	0.50	
	100.0		100.0	

It will be observed that the yield of products is quite different. The difference will become still greater if we will redistil these products of the first distillation for the purpose of obtaining the commercial products. The benzine, in fact, has to be redistilled in order to produce light spirit and light oils to be used for improving the quality of the illuminating oil.

The whole of the cracking products have to be redistilled in order to produce spirit, illuminating oil, and oil to be again put into still.

Lastly, the heavy paraffinous oils resulting from the distillation with superheated steam and vacuum have to be freed from paraffin in order to transform it into a spindle oil or a so-called mineral colza, used for burning in special burners either by itself or in a mixture with colza oil.

By carrying out these various treatments I have obtained the results given below in the way of quantities and qualities of products. These results are very instructive from an industrial point of view but are much more useful in demonstrating the necessity of coming to an agreement on the methods of analysis to be used for determining the commercial and industrial value of various crude oils at present produced in all parts of the world. This, I believe, is the task falling upon the International Commission created by the late International Petroleum Congress held in Bucarest.

Results of treatment of the products of the first distillation:—

By redistillation of the heavy spirit I obtained:—

40 per cent. by volume of a spirit of a spec. grav. of 0.739
60 " " " light oil of a spec. grav. of 0.760
and a flash-point of 29° C.

The illuminating oils of both distillations, refined in part, have produced :—

A white oil of a spec. grav. of 0.803; flash point, 54° C.; freezing point, below 10° C.

The heavy oils obtained by the distillation with superheated steam have yielded 7 to 8 per cent. paraffin, of a melting point of 52°C. , and, after refining, produced a very nice oil of a specific gravity of 0.850.

The cracking oils obtained by distillation with direct fire have yielded :—

Spirit	18	per cent. of a gravity of	0.757		
Oil	18	"	"	0.805; flash point	75° C.
	17.5	"	"	0.828	" 110° C.
	19.5	"	"	0.842	" 135° C.
	19.5	"	"	0.853	" 162° C.
	7.5	"	"	0.862; temperature	0° C.

The final results of the two distillations, after the further treatment of the products, were:—

Slow distillation by direct fire.	Per cent.	Distillation with superheated steam and reduced pressure to 45 cm. mercury.	Per cent.
Spirit—		Spirit—	
From first distillation	15.00	From first distillation	15.00
By re-distillation of the heavy spirit of the first distillation	6.00	From re-distillation of heavy spirit of first distillation	5.02
By re-distillation of the heavy spirit from the cracking process	2.04		
Light oils obtained by re-distillation of the heavy spirit of the first distillation ..	9.00	Light oil obtained by re-distillation of the heavy spirit of the first distillation ..	7.08
Illuminating oil of the first distillation ..	35.00	Illuminating oil from the first distillation ..	34.00
Illuminating oil obtained from the re-distillation of the heavy spirit from the cracking process	3.04	Spindle oil	20.75
Heavy illuminating oil obtained from the re-distillation of heavy cracking oils	24.02		
Heavy oils from the cracking process for putting back into the still	2.05	Paraffin	1.75
Coke	1.25		
Loss in distilling ..	1.25	Residuals for lubricating purposes	15.00
	<hr/> 100.00	Loss in distilling ..	0.50
			<hr/> 100.00

In practice, naturally, there will have to be taken into account the losses in handling and through imperfect condensation. Moreover, all the above results are given for unrefined distillates, and to these will have to be added the loss in refining.

The above results shew that the slow process of distillation is more advantageous in France, when dealing with American crude oil. But the case is quite different when other crude oils have to be treated, the illuminating oil fractions of which are more sensitive, and for which care must be taken not to decompose them by heat in course of distillation. Such are the Roumanian and Russian distillates, etc. For these latter the use of superheated steam is to be recommended.

I hope that I have sufficiently demonstrated the importance of the choice of a method of distilling, and I will finish by again calling the attention of petroleum people to the importance of adopting a precise mode of operation in examining crude oils.

Personally, I am inclined towards the method and apparatus, which will permit to effect the distillation, avoiding all chance of decomposition; or, on the other hand, a system which will give every chance of obtaining a total decomposition of the unstable products, but I do not admit the intermediary methods which give too elastic results.

NOTES FROM ALL QUARTERS.

RUSSIA.

Odessa Shipments.—During January the quantity of kerosene delivered to Odessa by sea amounted to 549,841 poods, which is 250,000 poods in excess of the preceding month.

Production Figures.—The production of crude oil at the Baku oil fields in the first 15 days of February amounted to 17,159,112 poods. There were no spouters at all during that period.

Spouter on the Russian Petroleum Co.'s Property.—A telegram from Baku, dated March 9th, announces the striking of a spouter on the property of the Russian Petroleum and Liquid Fuel Co., Ltd., at Bebe-Aibat.

Grosny Production.—The production of crude oil at the Grosny oil fields in December amounted to 3,230,482 poods, against 3,168,782 poods in November. Spouters in December contributed only 215,000 poods, against 358,350 poods in November.

Strikes in Progress.—According to a telegraphic report from Baku, dated the 2nd of March, the strikes on the properties of the firms of Messrs. Pitoeff, Mirzoeff and Miloff were then still in progress. A strike broke out on the property of Messrs. Miloff and Tairoff.

Interior Crude Rates.—The Tariff Committee of Russian railways has granted the request of the Russo-American Petroleum Refining Co. for a special reduced rate for carrying crude oil from Nijni-Novgorod to Kuskovo, where the refinery is situated. The rate has accordingly been reduced by one copec per pood.

Freight Advances.—The Tariff Committee of the Russian Railways, at a meeting held on February 24th, decided to raise the rate for carrying benzine and ligroin from Grozny to Novorossisk to the level of the rate in force for the transport of similar products from Baku, namely, 16.3 copecs per pood for ligroin and 18.3 copecs per pood for benzine.

Batoum Trade Revival.—A report from Batoum, dated February 13th (o.s.), shews that the export trade is a little more brisk than previously. During the week ended on that date the total shipments, thanks to some bulk cargoes, reached 679,000 poods. The arrivals of kerosene from Baku have also increased, reaching 1,000,000 poods for the week, the largest part of this oil belonging to Nobel Bros.

The Rossiskoie Petroleum Co. has in its second financial year, 1906, on a turnover of 930,403 roubles, earned a net profit of 274,989 roubles. Dividends have been declared—6 per cent. on the vendors' shares and 2.4 per cent. on the subscribed shares, on which only 40 per cent. has been paid up. The nominal capital is 2,000,000 roubles. There are debtors for 381,699 roubles and creditors for 572,925 roubles.

Liquid Fuel Contracts.—The Administration of Northern Railways has recently given out the following contracts for the supply of a total quantity of 5,000,000 poods of liquid fuel:—To Nobel Bros., for 1,750,000 poods at 38½ copecs for delivery in the summer at Jaroslav, and 39½ copecs for delivery in the winter; to the Mazout Co., for 1,750,000 poods at the same prices; to the Eastern Transport Co., for 1,500,000 poods at 38.2 copecs in the summer and 39.2 copecs in the winter.

AMERICA.

To Prospect at Center.—An oil company has recently been formed at Center, Texas, with a capital of \$20,000, to search for oil near that place. The prospects of striking oil are said to be very encouraging.

Activity in Monterey County.—There is now considerable activity in Monterey county, California, as a result of one of the largest oil interests entering the field. Up to the present, over 100,000 acres have been leased, though no oil has yet been discovered.

Crude Oil for Pumping Purposes.—The J. M. Guffey Petroleum Co. has recently adopted a new method of pumping its Spindle Top wells, which it is said will result in a very great economy being brought about. The company is installing engines to use crude oil as a source of power, operated much upon the same lines as the gasoline motor engine.

Success at Spindle Top.—The Big Five Oil Co. has met with such success at Spindle Top, that it has recently been able to pay a dividend of 65 per cent., besides transferring a considerable sum to the company's surplus fund for the further development of its holdings.

The West Dallas Refinery.—The Texas Company's refinery at West Dallas is now in operation, running oil from the Glenn Pool. The heavy portion of the oil is being shipped to fuel consumers, but the *Oil Investors' Journal* says that the distillate is being stored.

A New Canadian Company.—The Canada Southern Oil and Gas Co. has been organised with a capital stock of \$100,000 to take over various oil and gas leases in the Tilbury field. The company also hopes to secure the franchise to pipe natural gas to various points in north and west Tilbury.

Deep Well Development at Saratoga.—An effort is now being made to develop the deep sands in the Saratoga field. So far, we learn from the *Oil Investors' Journal* that five wells have been completed with very successful results in four cases, three of them doing over 100 barrels per day from the lower stratum.

The Utilisation of Natural Gas.—It is reported that the Producers' Oil Co., operating in the Jennings field, has recently equipped thirty boilers for the use of gas fuel, thus turning into profitable account the output of what is the largest natural gas well in Jennings. The *Oil, Paint and Drug Reporter* states that the change will mean a saving of about \$500 per day in the cost of fuel.

ROUMANIA.

A Prolific Well.—The Pitsgaia well of the Regatul Roman Co. has resumed its production, yielding between 150 and 250 tons per day. The oil from this well is of a superior quality and very rich in paraffin.

Crude Oil Prices.—In spite of the increased production of crude oil the price in Roumania remains unchanged at 43-44 francs per ton with a tendency to rise. The good prices now ruling are greatly stimulating the drilling of new wells.

Drilling by Contract.—Messrs. Marmarosch, Blank and Co. have, in conjunction with a German boring firm, established a new company for the purpose of undertaking drilling by contract in Roumania. The company will be called the Alliance Drilling Co., and its capital is 1,000,000 francs.

A Good Well at Calinet.—A well of the Bustenari Co. at Calinet has recently commenced to spout from a depth of at about 139 metres. As there was no storage accommodation beyond a reservoir for 60 tons, the bulk of the oil produced was lost. The yield of the well at the time of writing was about 60 tons daily.

Increasing Production.—In all probability the production in February will shew a considerable increase, as several new wells have become productive with large quantities, whilst the wells previously completed maintain their rate of output. Among the prolific new wells is one of the Romano-American Co. at Moreni, two of the Bustenari Co. at Calinet and Doftanet, and one of the Trajan Co. at Mislisora de Jos.

Activity in Boring Operations.—Most of the large companies operating in the Roumanian oil fields are about to largely extend their boring operations. Thus the Steaua-Romana intends drilling a considerable number of wells on its properties in the Campina and Bustenari fields. The Regatul Roman Co. has likewise decided to drill a large number of new wells on its properties at Pitsgaia and Moreni. The Colombia Co. is now commencing preparatory work for the drilling of ten new wells in and around Bustenari.

Competition.—In the lamp oil trade on the Roumanian home market the competition between the Romano-American Co. and the Refiners' Cartel continues in the same way as before. In course of the negotiations which are now in progress regarding the renewal of the cartel agreement, which expires in April, certain differences have arisen, but the majority of the refiners are in favour of renewing the cartel and continuing the struggle against the Romano-American Co. Attempts are still being made to come to an agreement with the Romano-American Co., and future action will depend on the result of the steps taken in this direction.

LATEST QUOTATIONS OF PETROLEUM SHARES.

ENGLISH COMPANIES.

This list is restricted to companies who have paid dividends or who are producers.

Company.	Capital Paid Up.	Value of Shares.	Latest Prices.
Assam Oil	£205,000	£1	1/5-8
Baku Russian Petroleum ..	£750,000 Ord.	£1	0/6-1/0
"	£650,000 5 1/2% Pref.	£1	2/0-3/0
Bibi-Eybat Petroleum Co. ..			5/6-6/6
Californian Oilfields ..	£385,000 Ord.	£1	5 3/4-6
Commonwealth Oil Co. Pref	18/- paid up (Prem.)		par 1/4pm
"	Def.. £1 fully paid		1-1 1/4
European Petroleum ..	£550,000 Pref.	£1	1/0-2/0
"	£550,000 Ord.	£1	0/6-1/6
"	£376,000 Deb.	£100	70-74
Russian Pet. & Liquid Fuel ..	£500,000 6 1/2% Pref.	£1	3/3-4/3
"	£600,000 Ord.	£1	2/0-3/0
Schil'laieff Petroleum ..	£575,000 6% Pref.	£5	1 1/4-1 3/8
"	£575,000 Ord.	£1	1/9-2/9
Shell Transport & Trading ..	£2,000,000	£1	44/3-45/3
"	£1,000,000 Pref.	£10	10 1/4-10 1/2
Spies Petroleum Company ..	£312,500	10s.	8/0-9/0

RUSSIAN COMPANIES.

Company	Nom. Value in Roubles.	Quotations on Mar. 9th.	
		Lowest Roubles.	Highest Roubles.
Baku Naphtha Co.	100	508	510
Balakhany Naphtha Co. ..	250	—	—
Caspian Society	1,000	4,200	4,225
Mazout Co.	250	—	—
Melikoff, A. C.	250	—	—
Mirzoeff Bros.	250	—	—
Naftalan Co.	250	—	—
Naphtha Co. "Kavkas" ..	250	—	—
Naphtha Trading Co., A. I. Manta-			
cheff & Co.	250	148	150
Neft Co.	250	—	—
Nobel Bros.	5,000	11,100	11,150
"	250	—	—
Rops and Co. V... .. .	250	—	—
Russian Naphtha Co. ..	250	—	—
Society Mazout	250	—	—
Ter-Akopoff Co.	250	—	—
Tumaieff & Co., J. G. ..	250	—	—
Volga-Caspian Naphtha and Trading Co	250	—	—
" (Second Issue)	250	—	—

SCOTCH COMPANIES

Supplied by Messrs. MACLEAN AND HENDERSON, STIRLING.

Company.	Capital Paid Up.	Value of Share.	Latest Prices.
Broxburn Oil Co., Ltd., Ord. 17/- pd	£235,000	£1	£2 2s. 3d.
Do. 6% Cum. Pref. ..	£100,000	£10	£12 7s. 6d.
Burmah Oil, Ord.	£1,100,000	£1	£3 16s. 3d.
Do. Pref.	£250,000	£1	£1 6s. 1 1/2d.
Dalmeny Oil Co., Ord. (7 paid) ..	£37,800	£8 10s.	£5 10s. od.
Do. 5% Pref	£18,900	£7	£4 3s. od.
Oakbank Oil Co., Ltd., Ord.	£170,000	£1	£1 9s. 9d.
(17s. paid)			
Pumpherstons Min. Oil Co., Ltd., Ord.	£110,500	17s.	£12 13s. 9d.
(17s. paid)			
Do. 6% Cum. Pref.	£100,000	£10	£13 5s. od.
Tarbrax Oil Co., Ltd. Ord. (£1 pd.)	£38,350	£1	£2 18s. od.
Do. 6% Cum. Pref.	£35,000	£1	£1 3s. od.
Young's Paraffin Co., Ltd., Ord. ..	£452,808	£4	£3 13s. 3d.
Do "B" Deb...	£150,000	£100	£152 10s. od.

DUTCH COMPANIES.

Company.	Latest Quotations (per cent.)	Florins
Arnhemsche Petroleum Mij.	—	1,000
Aurora (Deb. 5%)	88 7/8	—
Campina Poiana Mij.	—	—
Dordtsche Petroleum Mij. (Pref.) ..	130 1/2	50
" (Deb. 4 1/2%)	101	1,000
Gaboes	2 1/8	—
Holl. Rumeensche Petroleum Mij. ..	13	1,000
Int. Rum. Pet. Mij.	71 1/4	500
Java Petroleum Mij. (Ord.)	—	1,000
" (Pref.)	16 1/4	—
Koninklyke Nederl. Pet. Mij. Shares ..	280	250-1,000
" Share certificates ..	280	1,000
Mœara Enim Petroleum Mij.	139	100
" 1-1,000 Oblig. 5	—	250-1,000
" Moesi Ilir " Petroleum Mij.	—	—
Nederl.-Rumeensche Petroleum Mij. ..	3 1/2	—
Nieuwe Ned. Petroleum Mij. And. ..	—	1,000
Oliebronnen in Hannover Mij.	50	—
" (Deb. 5 %)	—	—
Panolan Maatschappij Cert.	282 1/2	—
Perlak Petrol. Mij. (6% cum. pr. A.) ..	135	1,000
" (Common)	—	—
Sumatra-Palembang Petroleum Mij. ..	91 1/8	500
Tarakan Petrol Mij.	37	—
Zuid Perlak Petrol. Mij. (Pref.) ..	82 1/8	—

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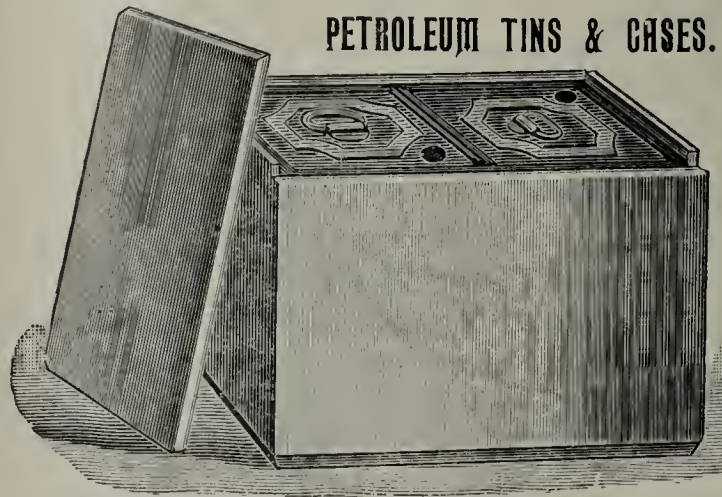
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THE PETROLEUM REVIEW,

45, St. Mary Axe, LONDON, E.C.

American Office: 150, Nassau Street, New York.

SATURDAY, MARCH 14, 1908.

FORE-WARNED IS FORE-ARMED.

IN several issues of the REVIEW during 1904 we
referred to the suicidal and absolutely unreasonable
policy which was at that time being adopted by the
large distributing oil firms in this country in carrying
on a "war" with each other in order to gain supremacy
in the distributing trade. At that time we shewed that the
cut-throat competition which was then being practised
to such an extent did not in any way assist to increase

the consumption of oil, but was simply giving the small retailer considerable and unwarrantable profits for the small service which he gave in selling the various illuminating oils to the consumer. Fortunately the large distributing firms soon realised the fallacy of such a policy, and they came to arrangements which were very beneficial all round, while the consumer has not had to pay higher prices than those which were demanded from him during the war of rates. Thanks to this *esprit de corps* among the few firms who are responsible for the distribution of oil in this country, they were able to bring the unfortunate war to an end, and realise prices for their products which have been remunerative, and as a consequence they have been in a position to spend money and energy in endeavouring to maintain if not increase the demand for illuminating oil for purposes other than its use in lamps.

There is no necessity to cloak the fact that the consumption of oil for lamp burning, both in England and upon the Continent, has of late years greatly diminished, but thanks to the energy which has been displayed, new channels for consumption have been opened up, and to-day we see that the application for kerosene for oil engines, etc., fully counterbalances the decreasing demand that is now experienced throughout the country for oil for illuminating purposes. The extended use of oil, for purposes other than that of burning in lamps, is of course a matter for congratulation, for it shews that those in whose hands the distribution of oil is placed, have been able to concentrate their activity, not in fighting their competitors in trade, but in seeking fresh outlets for an article which, either as an agent of light or power, has few, if any, equals. The friendly arrangements made, therefore, a few years ago, under which the whole of the oil distributing firms in this country worked amicably, have proved to be most beneficial.

Now, however, rumours are again afloat that we may soon expect a recurrence of the struggle of a few years ago, followed by an unreasonable slump in prices for illuminating oils.

Looking at the quotations of refined oil at the export ports of America and Russia, the two leading countries in the world who are still holding their own in the supply of illuminating oils, we do not see the slightest reason for reducing the prices to the consumer in this country: in fact, seeing the enormous and exceptionally high freights which the importer now has to pay for the transport of his oil, it says much for the perfect organisation prevailing in the distribution of oil in England that the consumer has not had to pay enhanced prices.

We would seriously appeal to those in power to consider the question of a war of prices in all its various aspects, and to count the cost before taking such a step as that which was so ruinous a few years ago. Without a doubt, the direct issue of a war in prices will be to break down the amicable arrangements which have now been in existence three or four years, and it is bound to result in a great loss to the respective distributing companies, without giving any of them a larger share in the trade than they now retain as past experience has proved.

But there is an aspect of the question which we regard as being of the utmost importance. We have to-day at the head of the various distributing branches throughout the kingdom a miniature army of nearly one thousand men who have devoted their energy and their life to this country's petroleum trade. From the events of past days we know that in times of war, when prices are cut even below what one might call their lowest point, the remuneration of these loyal servants is reduced, a direct result of which action is that the men are discouraged. At the best, their salaries are reduced; at the worst, their services are dispensed with in order that a reduction of staff expenses may furnish a few pounds more for the sinews of war to be so foolishly thrown away.

We are well aware, as every intelligent student must be, that money alone is not a sufficient weapon with which to make progress possible in a commodity whose use as a lighting agent is already on the wane. Unless there is that loyal pulling together of all engaged in the distributing trade, and unless the various staffs from one end of the country to the other receive every possible encouragement to go forward in their uphill work, then the trade in petroleum must of necessity seriously suffer. It therefore behoves the large distributing firms to seriously count the cost before they embark upon a policy which is not only in itself quite unreasonable, but which strikes a direct blow at loyalty and progress, for immediately it becomes a *sine qua non* that an employé in any of our large distributing companies occupies a position which is not secure, then, and then very quickly will uncertainty prevail, and our country's oil trade will fall to the little things from whence it sprung.

Friendly competition is good in any trade, but competition of a beggar-your-neighbour kind, brings nothing but regret, nor does it reflect any credit upon those responsible for it. To be fore-warned is to be fore-armed.

THE BAKU RUSSIAN PETROLEUM COMPANY, LIMITED.

The Shareholders' Committee have called a meeting of the principal holders of stock in the Baku Russian Petroleum Co., Ltd., which is to be held next Tuesday at 2.30 at the Cannon Street Hotel. In the circular calling the meeting, the Committee state that they consider that all differences which have hitherto existed should be set aside in order that a supreme effort can be made to save the concern. The Committee has been in communication with certain parties in Russia who are now willing to enter into arrangements whereby an assessment (as has been suggested in other quarters) can be avoided. It is to be hoped that there will be a large attendance at next Tuesday's meeting in order that concerted action may be taken.

The Director of Customs notifies that motor spirit in tins in the Transvaal, containing $4\frac{3}{4}$ American gallons falls under the general note to the tariff, and should pay duty on eight and one-third Imperial gallons per case of two tins, unless the tins are marked as containing $4\frac{3}{4}$ American gallons.

THE ECONOMICAL PRODUCTION OF GOOD PETROLEUM ILLUMINATION.

In a recent issue of the *Journal du Pétrole*, Mr. A. Guiselin gives some interesting data upon the above subject. He points out that in a report presented to the recent Petroleum Congress of Bucarest, M. Pihan insisted upon the care necessary in the case of tests of combustion intended to determine the commercial value of oils used for illuminating purposes. The precautions suggested by this chemist seem to the author so indispensable, that he publishes the results of an interesting series of tests on the subject by MM. Guiselin and Madoulé at the Laboratoire Central de la Compagnie Industrielle de Pétrole.

The object of these experiments was to study the influence upon the flame of the distance separating the upper level of liquid and the extreme upper end of the wick. The burners selected for the purpose of these tests were those of the round "Kosmos" type, with twelve slots, which are clearly the most generally used burners in France, while the varieties of petroleum utilised were selected among the varieties of oil of good quality sold under the names of "Pétrole de Luxe" and "Pétrole ordinaire" by the company referred to above.

In order to generalise the problem, MM. Guiselin and Madoulé also utilised four distinct burners having carriers of different construction designed to distribute the air in different ways within the chimney. In all these four lamps the wicks utilised were of the same nature and the glass reservoirs of the same dimensions. The reservoirs were originally provided with 500 cc. of ordinary petroleum. These were utilised in connection with the burners previously described. At the commencement of the test, which lasted ten hours, the flame was adjusted to its maximum intensity, that is to say, a position such that the slightest raising of the wick would cause the flame to smoke. The candle-power of each flame was obtained at intervals of 1, 3, 6, 8, 9 and 10 hours. The difference in weight, measured very exactly in the case of each lamp, enables us to calculate:—

1. The mean consumption per hour.
2. The consumption per Carcel-hour.

The results shew clearly enough the influence of the slightly different construction of the burners used.

This was repeated under exactly the same conditions, *i.e.*, utilising the same reservoirs, the same wicks, and the same burners, but this time filling the reservoirs completely with 700 c.c. of the same variety of petrol. In every case the candle-power and mean hourly consumption had increased.

This result, which is easily explained by the greater facility experienced by the petroleum in attaining the extremity of the wick, should cause no surprise, and only serves to confirm the recommendations of M. Pihan. But it is more surprising to find that in the case of all the burners the consumption per Carcel-hour is much greater in the first case than in the second, *i.e.*, when the lamps were completely filled. This result is of special

interest, because it enables the authors to clearly demonstrate the economy which is effected by the consumer when he refills his lamp.

When the same series of burners was employed with a better quality of petrol the authors obtained results which point to the same conclusions.

The final average results deduced from the tests referred to prove that the light obtained with "pétrole de luxe" is, on the whole, greater than that obtained by the use of "pétrole ordinaire," and also that in the case of both kinds of petroleum, a greater candle-power is obtained when the reservoir is completely filled with 700 cc. of oil than when it is only partially filled with 500 cc.

In order to make the tests quite complete it would be necessary to repeat them, utilising a constant level of petrol in the reservoirs. But the end which this interesting investigation has in view may be said to have been attained in so far as it enables the authors to advise the consumer to keep his lamp constantly refilled if he is anxious to obtain the most satisfactory illumination at the lowest expense.

THE PETROLEUM RESOURCES OF ROUMANIA.

BY THE CONSUL-GENERAL OF ROUMANIA.

The most valuable and important of the mineral resources of Roumania is petroleum. The petroleum zone in the country extends to the foot of the Carpathians, with a length of nearly 350 miles and a width of about 12 miles. The total area of the Roumanian petroleum fields is thus computed to be about 1,800,000 acres. According to the exploitation carried out up to the present, it is estimated that one acre of oil-bearing land has produced an average output of 10,000 tons. Assuming the extent of the oil-bearing land to be, at the lowest reasonable computation, 600,000 acres only, and the output per acre, on an average, only 6,500 tons, the petroleum resources of Roumania will amount to no less than 4,000,000,000 tons, which, at a net price of 12s. per ton, represents a value of £2,400,000,000. During the last forty years the exploitation has hardly reached 10,000,000 tons, so that the supply will be seen to be practically inexhaustible. The greatest annual output was that of 1,129,097 tons in 1907. There are to-day nearly £10,000,000 sterling invested in the Roumanian petroleum industry, the exploitation of which is carried on by means of the most modern and perfected mechanical appliances. The petroleum intended for export is taken to Constantza, the chief Roumanian port on the Black Sea, where it awaits shipment in immense reservoirs, from which it is subsequently carried by steamer to every part of the world. In view of the probable substitution of liquid fuel on board many ships of the British navy, it is interesting to note that the port of Constantza is situated within easy distance of several important British coaling stations.

THE BAKU RUSSIAN PETROLEUM COMPANY, LIMITED.

AN IMPORTANT CIRCULAR.

A circular has recently been issued by the Shareholders' Committee of the Baku Russian Petroleum Co., Ltd., which urges the shareholders to be upon the *qui vive* for developments. It is a very pointed circular, and worthy of publishing *in extenso*. It reads:—

The board have kept the shareholders in the dark for over eighteen months, and then tamely consented to the appointment of a receiver, now in possession of your property. What opportunity have you had as shareholders for concerting measures to save your undertaking?

The directors' circular of the 20th February indicates that the board are preparing some financial proposals. If these proposals involve an assessment or reconstruction, you should not at the coming meeting, unless voted down by the proxies of the vendors and other interested absentees, entrust any further funds to the same negligent and incompetent hands.

All friendly overtures have been persistently refused by the board, but the committee since Mr. Rutherford visited Baku and inspected the company's properties in September last, have relaxed no effort towards rescuing the undertaking. The committee believe that the properties of the company are amongst the best oil properties in the world and are worth at least a million sterling.

The committee also believe that if empowered to do so they could save the concern without assessment or reconstruction.

After the experience which the committee have had of the Board, it is no use putting the committee's scheme before them, much less bandying words in reference to the unfounded and ungenerous charges in the board's circular of the 20th inst.

The committee now challenges the board to forthwith call a general meeting of the shareholders so that the proposals of the board and those of the committee may be discussed and the right course adopted before further disaster. Every shareholder is urged to make a special effort to be personally present, and in no case to send a proxy to any member of the present board.

Immediately the meeting is convened, a further communication will be sent to you, giving you an opportunity of sending your proxy to us, but if you could possibly arrange to be personally present, this would be better than giving any proxy whatever.

The present board could not be much weaker than it is, because Mr. Herbert Allen, the new chairman, has become the receiver for the debenture-holders. Mr. Booth died on 5th November, 1907; Mr. Wimble resigned 7th November, 1907; Mr. Drew resigned 19th November, 1907; and Col. Ivor Philipps, M.P., late chairman, resigned 1st January 1908, and their places have not been filled up.

The Grand Gulf Company.—This is the title of a recently-formed company which, with a capital of \$100,000, proposes to prospect for oil, sulphur, gas and salt in the Jennings field. The company also intends to build pipe lines and erect a refinery.

AMERICAN PETROLEUM EXPORTS.

STATISTICS FOR JANUARY.

According to the official publication of the Washington Bureau of Statistics, the exports of petroleum from America from the various ports during January were as under:—

	1907. Quantities. Gallons.	1908. Quantities. Gallons.
CRUDE—		
Baltimore	—	—
Boston and Charlestown	—	—
Delaware	—	—
New York	1,600	1,250
Philadelphia	6,203,724	3,167,917
Galveston and Sabine	1,243,570	2,577,167
Total	7,448,894	5,746,334
Total value for the month, 1907	\$418,119	
" " " 1908	\$294,531	
NAPHTHAS—		
Baltimore	300	—
Boston and Charlestown	—	4,650
Delaware	—	—
New York	354,242	1,292,248
Philadelphia	874,697	862,118
Galveston	—	—
Total	1,229,239	2,159,016
Total value for the month, 1907	\$129,760	
" " " 1908	\$264,535	
ILLUMINATING—		
Baltimore	1,208,026	279
Boston and Charlestown	4,542	7,727
Delaware	—	—
New York	31,952,565	45,747,926
Philadelphia	19,156,630	27,340,123
Galveston	1,155,123	1,698,221
Total	53,577,886	74,794,276
Total value for the month, 1907	\$3,482,881	
" " " 1908	\$4,905,682	
LUBRICATING—		
Baltimore	344,630	466,262
Boston and Charlestown	28,369	26,303
Delaware	—	—
New York	6,975,221	9,486,800
Philadelphia	2,227,038	2,943,532
Galveston	4,224	8,580
Total	9,579,482	12,932,477
Total value for the month, 1907	\$1,226,152	
" " " 1908	\$1,742,741	
RESIDUUM—		
Baltimore	—	—
Boston and Charlestown	12,500	—
Delaware	—	—
New York	3,000	5,000
Philadelphia	6,153,198	3,355,609
Galveston	—	39,018
Total	6,168,698	3,399,627
Total value for the month, 1907	\$196,047	
" " " 1908	\$106,133	
TOTAL MINERAL OILS—		
Baltimore	1,552,956	466,541
Boston and Charlestown	45,411	38,680
Delaware	—	—
New York	39,285,628	56,534,224
Philadelphia	34,615,287	37,669,299
Galveston	2,403,917	4,322,986
Total	77,904,199	99,013,730
Total value for the month, 1907	\$5,452,959	
" " " 1908	\$7,313,622	

Activity in the Kern River Field.—The Associated Oil Co. has fixed up a contract with many of the producers in the Kern River field which calls for the delivery of a daily average of 15,000 barrels of oil for the next two years. The price for the first year is 6 ½ cents, and for the second year 63 cents. As a result of this, preparations are being made to drill an additional number of wells, some of these being located in the extreme limits of the present producing areas.

TANK CHARTERS.—Concluded.

	TONS CAP.	RATE PER TON.	PORTS OF SHIPMENT AND DESTINATION.	NUMBER OF VOYAGES.	CARGO.
DEC.	3250	32/6 33/-	Black Sea—A French Atlantic Port, excluding Rouen Rouen	1	Refined.
			Option to carry Spirit of Petroleum at an additional rate of 2/6 per ton		
	2200	18/-	Batoum or Novorossisk or Kustendje—A Mediterranean or Adriatic Port, excluding Spanish Ports ..	1	{ Pale and/or Black Lubri- cating Oils.
		23/-	Batoum or Novorossisk or Kustendje—Continent (Bordeaux-Bremerhaven)		
	2200	23/9	Batoum or Novorossisk or Kustendje—Hamburg..	4	{ Pale and/or Black Lubri- cating and/or Gas Oil
		23/-	Batoum or Novorossisk or Kustendje—Continent (Bordeaux-Bremerhaven)		
		23/9	Batoum or Novorossisk or Kustendje—Hamburg..		
		18/-	Batoum or Novorossisk or Kustendje—A Mediterranean or Adriatic Port excluding Spanish Ports ..		
			Option to load at Braila at 1s. per ton in addition to Black Sea rate		
	2400	32/-	Black Sea—A French Atiantic Port, including Rouen ..	1	Crude.
	4500	33/9	Novorossisk—Thames Haven	1	Spirit.
	2200	14/-	Black Sea—A Mediterranean Port	2	Distillate.
	2500	35/-	Kustendje—Ronen	1	Crude and/or Distillate.

PETROLEUM IMPORTS INTO THE UNITED KINGDOM DURING FEBRUARY.

THE SHIPMENTS INTO VARIOUS PORTS.

The imports of petroleum products into the various
ports of the United Kingdom during February
amounted to 19,748,110 gallons, as compared with

approximately 30,000,000 gallons for January and
22,203,660 gallons for February a year ago. The
figures of the various shipments are as under :—

PORT.	Lubricating.	Illuminating.	Residuals.	Benzine.	Other Products	Fuel.	Gas.
Belfast	3,100	478,800	—	—	—	—	774,000
Bristol	162,510	985,920	—	—	3,200	—	268,380
Cardiff	15,850	459,000	—	—	—	—	—
Dublin	—	912,400	—	—	—	—	—
Dundee	—	640	—	—	—	—	—
Glasgow	488,150	11,250	4,000	—	22,000	—	—
Gloucester	1,820	—	—	—	—	—	—
Goole	1,200	—	—	—	—	—	—
Grangemouth	14,830	21,120	—	—	—	—	—
Grimsby	3,210	—	—	—	—	—	—
Hartlepool	400	—	—	—	—	—	—
Harwich	1,220	—	—	—	—	—	—
Hull	275,760	—	—	280	—	—	5,640
Leith	12,030	19,620	—	—	—	—	—
Liverpool	886,610	666,240	11,120	—	25,080	—	—
London	1,399,600	5,558,940	4,980	1,489,330	20,780	—	2,482,120
Manchester	621,060	1,550,400	—	—	29,540	—	—
Middlesboro'	760	—	—	—	—	—	—
Newcastle	21,720	—	—	—	—	—	—
Newport	2,000	—	—	—	—	—	—
Plymouth	200	—	—	—	—	—	—
Southampton	28,000	—	—	—	—	—	—
Swansea	3,300	—	—	—	—	—	—
Totals	3,943,330	10,664,330	20,100	1,489,610	100,600	—	3,530,140

CLASSIFIED IMPORTS INTO UNITED KINGDOM UP TO MARCH 9th, 1908.

IN GALLONS.

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COUNTRY.	ILLUMINATING.		LUBRICATING.		RESIDUALS.		GAS OIL. (Solar)		BENZINE.		FUEL OIL.		OTHER DESCRIPTIONS.		TOTALS.	
	Since Feb. 24.	From Jan. 1.	Since Feb. 24.	From Jan. 1.	Since Feb. 24.	From Jan. 1.	Since Feb. 24.	From Jan. 1.	Since Feb. 24.	From Jan. 1.	Since Feb. 24.	From Jan. 1.	Since Feb. 24.	From Jan. 1.	Since Feb. 24.	From Jan. 1.
Austria	—	—	—	16,000	—	13,180	—	—	—	—	—	—	—	—	—	29,180
Belgium	—	—	24,750	154,500	24,000	24,000	—	—	—	40	—	—	—	—	48,750	178,540
Canada	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Dutch India	—	—	—	—	—	—	—	—	2,851,130	—	—	—	—	—	—	2,864,130
Germany	10,880	341,820	43,870	340,130	4,650	6,090	—	—	—	—	—	—	480	2,360	59,880	690,400
Holland	—	—	2,420	7,650	—	—	—	—	39,000	43,840	—	—	—	14,860	41,420	66,350
Roumania	—	2,325,900	—	—	—	—	—	3,083,150	—	966,080	—	—	—	—	—	6,375,130
Russia	—	3,687,060	—	768,000	—	—	—	—	—	—	—	—	—	—	—	4,455,060
U.S.A.	3,032,800	21,548,360	1,727,810	8,819,550	—	11,120	252,600	8,421,930	—	349,840	1,176,000	1,176,000	60,430	550,880	6,249,640	40,877,680
Other Countries	—	—	9,790	34,010	—	—	—	—	—	280	80	520	160	160	10,030	34,970
	3,043,680	27,903,140	1,808,640	10,139,840	28,650	54,390	252,600	11,505,080	39,000	4,224,110	1,176,080	1,176,520	61,070	568,260	6,409,720	55,571,440

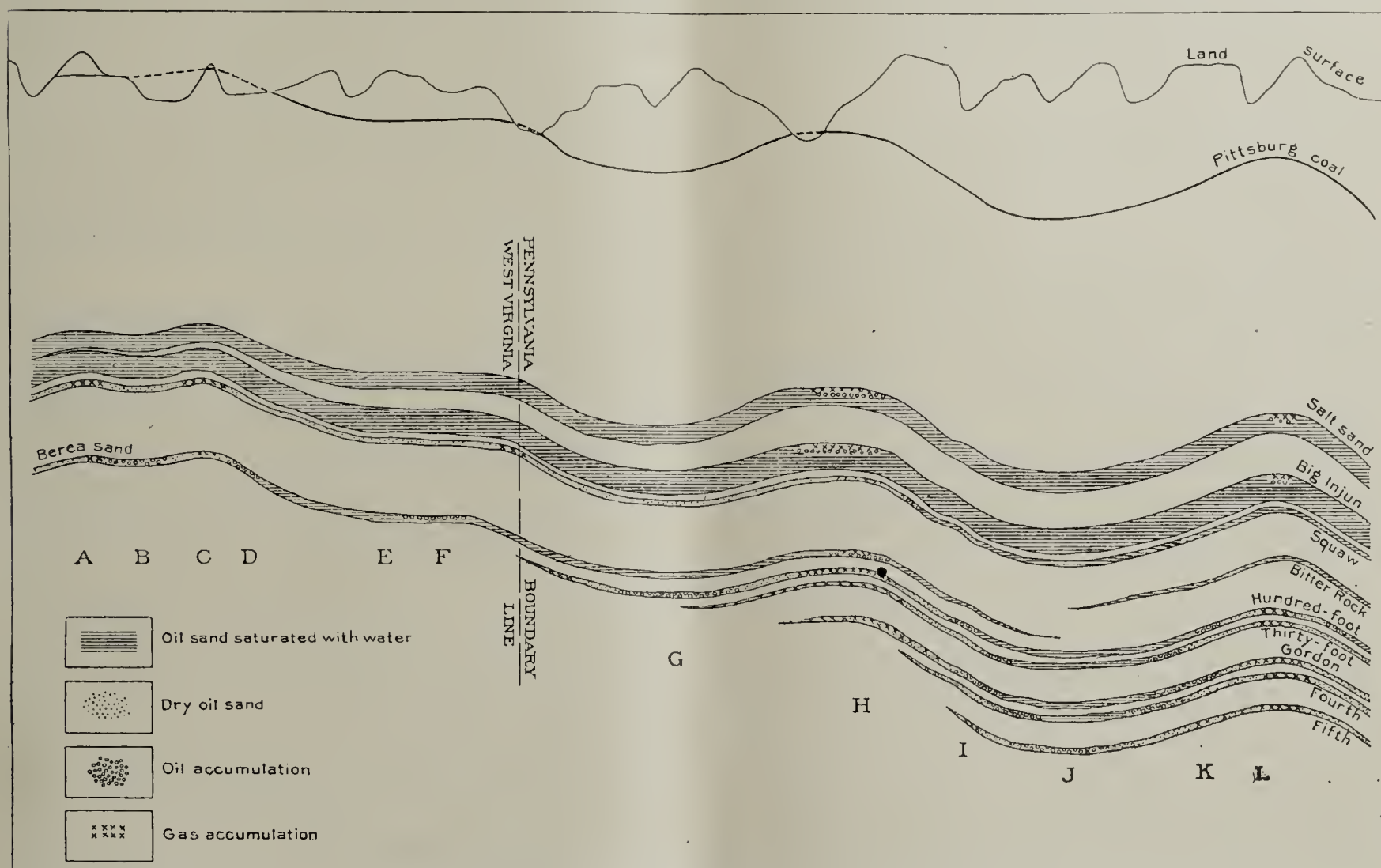
THE OCCURRENCE OF PETROLEUM AND NATURAL GAS IN THE APPALACHIAN OIL FIELDS.

By Messrs. W. T. GRISWOLD and M. J. MUNN.

The rocks from which the oil and gas of the Appalachian fields are derived are of sedimentary origin. They are porous rocks, principally sandstones, embedded in and underlain by a great thickness of shale. Below the shale are probably heavy limestone beds. The sandstones are numerous; they lie approximately parallel to one another and occupy a section in the geologic column of more than 2,000 feet, extending from the Allegheny formation of the Pennsylvanian series nearly to the base of the Devonian system. Generally the rocks shew evidence of fairly continuous sedimentation, but in the early stage of Pennsylvanian time the surface was raised

The sandstones which shew in outcrop in northern Ohio and New York are 2,000 to 3,000 feet underground in the southwest corner of Pennsylvania and in West Virginia. The dip of the formations is not regular, but is the result of two periods of folding. The main folds have a north east-southwest trend, the secondary folds crossing these at right angles. On the northwestern side of the main trough the secondary folds give rise in places to northwest dips, but these are of minor significance in the general southeast slope of this side of the trough.

Each important sandstone bed underlies many square miles of territory, usually including a number of



DIAGRAMMATIC SECTION OF SANDS IN CENTRAL APPALACHIAN OIL REGION.

above water level, and the greater part of the Mauch Chunk formation was eroded before the later sediments were deposited, leaving an unconformity at the base of the Pottsville formation.

The oil-bearing sandstones vary greatly in composition and texture. The upper or younger sands are usually white, some being of uniform texture and others containing lens-shaped bodies of conglomerate in which the separate pebbles are of considerable size. The older or lower beds are of brown or reddish sandstone and are usually more uniform in texture.

In general the Appalachian oil fields occupy the bottom and western side of a large spoon-shaped structural trough. The rim of this trough may be considered as passing through central Ohio, swinging eastward south of the Great Lakes, and thence southward along the western base of the Appalachian Mountains.

countries. They have been traced from point to point by means of the drill, until the limits of the different beds are fairly well known. These sandstones are most numerous and attain their greatest thickness in the centre of the region, only the upper beds extending to the western margin of the fields. In some localities two or more sands produce oil. Usually, however, the lowest sand is the most prolific. It often happens that gas is produced from a number of sands in one locality.

The areas which have produced oil and gas have been of all sizes and shapes, and the depth of productive wells ranges from 100 to 4,000 feet. It has been noticed, however, that in many cases the area of oil production is in the form of a belt extending for a number of miles and having but slight width compared to its length. The direction of these belts of productive territory is parallel

to the principal geologic folds of the region. Drilling with the object of finding new productive territory is of a most speculative nature. Any one of five results may be the outcome of the well when the sand is pierced. (1) The sand rock may be found to be hard and close, incapable of holding oil or permitting the flow of any liquids through its mass; (2) the sand may be good but perfectly dry; or (3) it may be good sand and be completely saturated with salt water, which may fill the well to a depth of several hundred feet or even in some cases flow out upon the derrick floor. Favourable results may have any degree of success. (4) Gas may be found with hundreds of pounds of rock pressure to the square inch and in a volume of millions of feet a day, or there may be only sufficient gas to serve a house or one or two boilers. (5) Oil may be encountered in such quantities and with such pressure that it will gush from the well at the rate of thousands of barrels a day, or there may be only a gradual seeping of oil into the well that will amount to but a barrel or two a day.

The organic matter embedded in the shale which lies below and between the oil-bearing sandstones mentioned above may have been the original source of petroleum. This hypothesis is accepted in this paper, though such acceptance is not meant to imply that the hypothesis is established beyond question or that there are not facts and arguments which point to other sources of petroleum than the organic matter found in the accompanying sedimentary formations.

Whether the petroleum comes from within or from below the shales, it must pass through them, and to do this it must pass through the very small pores existing in those relatively impervious beds. The nature and cause of this movement are not understood. Capillary action and great rock pressure may be suggested as causes which aid in forcing the petroleum out from the shales, but there are not sufficient data on this subject to justify any scientific explanation. It matters little what is the ultimate source of the oil; the important facts are its occurrence now in the porous sandstones, its circulation through the rocks, and the conditions leading to its accumulation in commercial deposits.

The porous rocks into which the oil and gas enter may be dry or they may be completely saturated with water. In most cases it is probable that a combination of these two conditions exist - that the porous rocks are completely saturated with water up to a certain level, but above that point they are dry. The movement of the hydrocarbons through the rocks will not be the same in the two cases, and therefore each condition must be considered separately.

If small quantities of oil and gas enter a dry porous rock at different points the oil will flow down as long as gravity is sufficient to overcome the friction and the capillary attraction. The gas will diffuse with the air or water vapour contained in the pores of the rock.

Oil and gas entering a porous rock that is completely saturated with water will be forced up to the top of the porous stratum by the difference in the specific gravity of the hydrocarbons and the water. Here the oil and

gas will remain if the porous stratum be perfectly level, but if it has a dip sufficient to overcome the friction the particles of oil and gas will gradually move up this slope, the gas with its lower specific gravity occupying the higher places.

In case the porous rocks are partly saturated a combination of these two actions will take place. The oil entering above the line of complete saturation will flow down to that line and the oil entering below will be forced up to the top of the completely saturated portion.

The statements given above are based on the assumption that the oil-bearing rock is homogenous throughout and that the oil will move with the same degree of freedom in every direction. This is rarely the case. Sandstones are noted for their irregularity in composition, as regards both the size of the individual grains of sand and also the material which cements the grains together. It is obvious that any fluid will move more rapidly through a coarse conglomerate imperfectly cemented than through a dense, fine-grained sandstone the particles of which are thoroughly coated and all the interstices filled with impervious cement. If the oil-bearing rock contains areas practically impervious, these areas, according to their size and position, will be more or less perfect barriers against the movement of the oil or the gas.

In dry rocks the principal points of accumulation of oil will be at or near the bottom of the synclines or at the lowest point of the porous medium, or at any point where the slope of the rock is not sufficient to overcome the friction, such as structural terraces or benches. In porous rocks completely saturated the accumulation of both oil and gas will be in the anticlines or along level portions of the structure. Where the area of porous rocks is limited the accumulation will occur at the highest point of the porous medium, and where areas of impervious rocks exist in a generally porous stratum the accumulation will take place below such impervious stop, which is really the top limit of the porous rock. In porous rocks that are only partly filled with water the oil accumulates at the upper limit of the saturated area. This limit of saturation traces a level line around the sides of each structural basin, but the height of this line may vary greatly in adjacent basins and in different sands of the same basin.

Partial saturation is the condition most generally found, in which case the accumulations of oil may occur anywhere with reference to the geologic structure; it is most likely, however, to occur upon terraces or levels, as these places are favourable to accumulation in both dry and saturated rocks.

Under all conditions the most probable locations for the accumulation of gas are on the crests of anticlines. Small folds along the side of a syncline may hold a supply of gas, or the rocks may be so dense that gas cannot travel to the anticline, but will remain in volume close to the oil.

The accompanying illustration is a diagrammatic section through the oil-producing formations of Ohio and Pennsylvania based on data from actual surveys. It shews those sands which are found under the

Steubenville quadrangle and extends to those that are known to exist in Pennsylvania. In it is represented the unconformity which has been shewn by David White to exist at the base of the Pottsville formation throughout the entire western edge and probably the central part of the Appalachian coal field, evidence in favour of which has been found in the well records examined in the course of this investigation. The salt sand represents the base of the Pottsville formation. Below this is the Big Injun or Pocono sandstone, and about 350 feet below the bottom of the Pocono is the Berea sand, which extends over a large portion of eastern Ohio and is represented by the Thirty-foot shells above the Hundred-foot sand in western Pennsylvania. Commencing not far from the line between Pennsylvania and West Virginia, the Hundred-foot sand appears below the Berea sand. Farther east in Pennsylvania the Thirty-foot, the Gordon, the Fourth, and the Fifth sands appear. These sands are all represented on the sketch in approximately their correct vertical positions. It has been shewn by the logs of wells that the Salt and Big Injun sands are pretty thoroughly saturated with water throughout most of the area investigated. The upper limit of saturation of the Berea sand, shewn at the point (*d*) on the diagram, is about 250 feet below sea level.

In Pennsylvania the Hundred-foot sand is found to be dry through most of the Burgettstown quadrangle. After reaching the vicinity of the McDonald oil pool it is completely saturated with water. The Gordon sand in the Washington pool is saturated up to a definitely marked level around the sides of the syncline, with the productive area directly above. The Fourth and Fifth sands in this syncline have less water, and in them the oil is found much nearer the centre of the basin.

By applying to the section the conclusions regarding the movement and accumulation of oil and gas under various conditions, the probable points of accumulation can be shewn. Any oil entering the Berea sand between (*g*) and (*i*) will accumulate at the point above (*h*) in close proximity to the gas. This part of the Berea sand is completely saturated with salt water, and the oil will be forced to the highest point.

Oil entering the Berea sand between the points F and G will be moved along from G to F. Here the sand is level, and the difference in specific gravity of the fluids only has a tendency to keep the oil in the upper portion of the sand and exerts no force to move it laterally. Between E and D the tendency of the oil is to move up to the top of the water at D. Beyond this point there is no tendency of the oil to rise. It would therefore accumulate at this point, the gas occupying the space higher up.

Oil entering between A and C would accumulate in the small syncline at B. If during some previous time, but while the rocks were in the same position as they are to-day, the water-level of the Berea sand was higher than it is at the present time, all the oil which entered the stratum from B to E would have been forced up into the anticline at C. If since that time the water-level has been gradually sinking, the oil would follow it

down to the syncline at B and to the top of the water-line at D.

The sand rocks were deposited in the sea, and at that time must have been completely saturated. The saline water now contained in these rocks may or may not be the water of original deposition. To state that the saline water within these sandstones is gradually diminishing would require proof and many explanations that are not at hand. There are, however, facts which point to this condition, the most important of which is that the smallest areas of complete saturation are found in the lowest and therefore oldest sandstones, and there are certain areas, notably in the Beaver quadrangle, where the Berea sand is relatively high and above the line of saturation. Within this area very small structural depressions seem to hold accumulations of oil out of proportion to the area drained.

The upper level of saturation in the Hundred-foot sand is lower than in the Berea sand. Oil entering the stratum between F and H would accumulate in the syncline at G, with the gas extending to the dome at H and to the limit of the sand towards F. In the synclinal trough between H and L the accumulation in the Hundred-foot sand would be at the water line above I and above K.

The area of saturation is less in each sand below the Hundred-foot. In the Fifth sand, which is the lowest found within the area so far investigated, the accumulation of oil is at the lowest point in the syncline, except in the lowest portions of tiny basins along the synclinal trough, where small areas of ponded water still remain.

PRODUCTION OF ENGLISH COMPANIES IN RUSSIA.

BAKU RUSSIAN PETROLEUM CO., LTD.—The production for the week ended February 29th was 212,000 poods, or 3,417 tons; and for the week ended March 7th was 213,000 poods, or 3,434 tons.

RUSSIAN PETROLEUM AND LIQUID FUEL CO., LTD.—The production for the week ended February 29th was 238,000 poods, or 3,837 tons; and for the week ended March 7th was 198,000 poods, or 3,193 tons.

SPIES PETROLEUM CO., LTD.—The output for the week ended March 1st was 365,775 poods, or 5,899 tons, of which fountain No. 5, well Baskakoff, produced 227,175 poods, or 3,654 tons. The production for the week ended March 8th was 342,935 poods, or 5,531 tons, of which fountain No. 5, well Baskakoff, has given 209,595 poods, or 3,380 tons. The fountain still continues, the yield for March 9th being 30,145 poods, or 486 tons.

THE EUROPEAN PETROLEUM CO., LTD.—The production for the week ended March 1st was 127,171 poods, or 2,050 tons; and for the week ended March 8th was 125,263 poods, or 2,019 tons.

In Illinois.—The production of the Illinois field still remains far in excess of shipment facilities. For the first three weeks of February the pipe line runs reached about 1,400,000 barrels, while the deliveries were but 3,360 barrels.

ENGLISH PATENTS.

(Specially contributed by Messrs. EDWARD EVANS & Co., Consulting Engineers, Chartered Patent Agents, and Enrolled Patent Attorneys, of the United States, of 27, Chancery Lane, London, W.C.)

APPLICATION PUBLISHED IN GREAT BRITAIN.

Improvements in and relating to Apparatus for Filtering Petrol or other Liquid Fuel, and Deodorising the Fumes caused by the use of same in Motors of Motor Road Vehicles.—Alfred John Barnes, of 11, Queen Victoria Street, London, E.C. No. 594 of 1907.

This relates to an apparatus for filtering petrol or other liquid fuel, and deodorising the fumes caused by the use of same on motor road vehicles, comprising a container connected with the carburetter or engine, and having within it an inner and an outer cylinder, both of which are perforated, and having a covering or lining of wire gauze, the inner cylinder being connected with the petrol or like tank, there being in the space between the said cylinders a neutralising or deodorising preparation or powder through which the petroleum or equivalent passes on its way to the carburetter or engine.

Petroleum Incandescent Burners.—Ellen Henriette Marianne Paerén, 14, Lorensbergsgatan, Gothenburg, Sweden. No. 23116 of 1906.

This relates to devices for petroleum incandescent burners in which the petroleum supply pipe is surrounded by a heating pipe pivoted thereto and with slots in it for forming flames for heating the petroleum pipe runs parallel with the petroleum supply pipe, and the wick is pulled out through all the slots in the heating pipe in order that all the wicks so exposed may be lighted simultaneously, whereby a quick heating is attained.

Method of Manufacturing Emulsions.—O. Pirsch. No. 17976 of 1907.

This relates to a process for the manufacture of emulsions in general, and particularly the emulsions of heavy petroleum oils, by means of an injector consisting in passing one of the constituent liquids at a proper pressure through the injector in such a manner that it sucks and drives along the other to an amount proportionate to the pressure, and brings it into such a state of division that the liquids mix intimately, instantly forming an emulsion of great stability.

An Improved Process for the Distillation of Illuminating Petroleum and Apparatus therefor.—Ulrich Ganz and Carl Johann Faller, of Alte Beckenhofstrasse, 42, Zurich, No. 6878 of 1907.

This relates to a process for distilling illuminating petroleum without the risk of explosion, according to which the alembic in which the petroleum is to be distilled is partly filled with water and salts of potash or soda are added. Then the remaining portion of the alembic is nearly filled with petroleum and the contents heated. The steam from the water mixed with the potash or soda is conveyed through tubes to the surface of the

petroleum in the alembic and there mingles with the vapour arising from the petroleum which is heated by the steam as it rises from the water mixed with potash or soda salts. In consequence of the steam or water being mixed with the vapour from the petroleum the latter is deprived of its explosive properties as the gases which contain the specific petrol-odour and are inflammable at a low temperature are thereby bound.

GROSNY PRODUCTION DURING 1907.

The total production of crude oil at the Grosny oil fields in 1907 has amounted to 39,403,700 poods, against 38,373,603 poods produced in 1906. The quantities produced by spouters and by baling in 1907, against 1906, were:—

	1907.	1906.
By Spouters	5,373,850	8,331,691
„ Baling	33,840,762	30,041,912

The total production of each of the operating firms in 1907, compared to 1906, was as under:—

	1907. Poods.	1906. Poods.
Akhverdoff	18,162,200	21,421,716
Spies Petroleum Co., Ltd. ..	6,729,445	6,466,029
Anglo-Russian Maximoff Co., Ltd.	6,560,906	4,934,300
Kasbeck Syndicate, Ltd. ..	1,798,370	1,774,180
North Caucasian Oilfields, Ltd.	1,330,260	1,668,780
Tcheleken-Daghestan Co. ..	1,268,432	1,081,026
Russian Standard	975,543	757,263
Maximoff, Executors of ..	703,740	53,150
McGarvey	463,508	154,586
Moscow Co.	400,400	476,150
St. Petersburg Co.	318,400	312,300
Caspian and Black Sea Society	280,200	401,895
Kholodovski	22,448	53,869
Vladicaucasian Co.	720	—

Mr. Stourdza, the present Roumanian Prime Minister, has accepted the honorary position of President of the Roumanian Petroleum Association. The request was made by a deputation consisting of Messrs. Alimanestianu, Sch'awe, Spies, Boamba, Coucou-Starostescu, Herzog, Edeleanu, Zeutler, Elias, Rusicka, Campeanu, Pleyte, Moody, and several other gentlemen prominent in the petroleum trade.

The Baku Association.—At the recently-held meeting of the Petroleum Association at Baku, it was resolved, for the purpose of wiping off the deficit in the finances of the association which accumulated up to the 1st January, 1908, to impose a special levy on the petroleum producers and refiners at the rate of 1/10 copek per pood of crude oil produced, pumped, or distilled during the year. This to be for a period of four years. The Government's sanction has been asked for the imposition of this levy.

GULF REFINING CO.,

Refiners of Indian Territory and Texas Petroleum.

We make a Speciality of
SUPERIOR LUBRICATING OILS OF HIGH VISCOSITY AND LOW COLD TEST.

Our Kerosene and Gasoline are manufactured from high grade Indian Territory Crude Oil.

Prompt Shipments from New York, Philadelphia, Boston, New Orleans and Port Arthur, Texas.

Special Prices to Large Jobbers and Refiners
CORRESPONDENCE SOLICITED.

General Sales Office—**FRICK BUILDING ANNEX, PITTSBURGH, PA., U.S.A.**

European Representative—**H. E. WATSON, 10, RUE THIMONNIER, PARIS, FRANCE.**

The American Oil Market.

New York, Week ended Feb. 29th.

The week's developments in the older fields producing high grade oil have presented little of noteworthy interest, and new completions have not been of a character to arouse any particular encouragement. Brooke county in West Virginia remains the scene of uninterrupted activity, especially along the Ohio River, near Follansbee, where tests are in progress with a view of determining the possibilities of a pool. The incentive to operations in this district, which started at the rate of nine barrels an hour, has shewn a steady decline, and when it recorded little more than 100 barrels a day, it responded to a charge of explosive by approaching the 200 barrel mark, and for several days after maintained a steady output around 175 barrels. In the Hollidays Cove pool in the same county late completions have been of comparatively light capacity. The best result reported during the interval was one credited with an initial flow of 60 barrels a day. Extensions to the present defined limits of the pool, says the *Oil, Paint and Drug Reporter*, do not appear to be of promising realisation. In the Keener sand pool of Grant district, Ritchie county, in the same State, the leading producers have been sustaining a creditable record, several of them well in excess of 100 barrels a day, and when stimulated by an explosive, some of the older wells doubled their capacity. Deep sand operations in Monongalia county, West Virginia, have resulted in light producers, where dusters were not encountered, and further tests will probably be stayed until more favourable weather conditions prevail. No better results in the lower strata of Wetzel county have been disclosed. Of commanding interest in the Lima field of Northwestern Ohio and Indiana has been the further enhancement of five cents in the three grades of crude. The recent advances are likely to prove a keen incentive to renewed drilling as soon as field conditions become more favourable. Our Mid-Continent correspondent writes of a practical cessation of drilling in that field. The once-famous Glenn pool is almost deserted, and the production of the old wells, it is estimated, will shew a decline of 25 per cent. during February. One of the best producers drilled in the Spindle Top field of Texas in the last six months has been reported in the completion of a well whose daily capacity was placed at 600 barrels. The Jennings field of Louisiana has been the scene of further successful operations in the south-western section, two wells being brought in with a total production of about 1,200 barrels. Our California correspondent writes of continued activity in the various fields of the State.

REFINED AND PRODUCTS.—The export movement has constituted the principal activity in the local market for refined, clearances during the interval aggregating 14,681,040 gallons, of which 8,880,000 were shipped in bulk. Our previous record shewed a total of 9,093,940 gallons (7,100,000 in bulk), but this amount represented a period that was shortened by the holiday, the missing day's quantity being included in the above aggregate for the current week. Chartering has been fairly active, engagements being reported of 170,000 cases for May-June shipment to Shanghai, and 175,000 cases for June shipment to the same port, both New York loading, and 75,000 cases for April-June shipment, 75,000 cases for April-May shipment, and 170,000 cases for April shipment, all to Japan, Philadelphia loading. Domestic trading has been of average seasonable proportions. There have been no new developments affecting quotations.

Conditions have not been especially favourable for an active market for the products, but the firmly maintained position of crude is reflected in a continued stability of values, especially for the higher test varieties. Exports of naphtha were particularly light, clearances for the week totalling 30,100 gallons, against 119,760 gallons noted previously. Residuum has been in moderate request for export, the volume for the week amounting to 7,350 gallons.

CLOSING QUOTATIONS.

CRUDE.	In cents per gallon.	Week ended	
		Feb. 22. 1908.	Feb. 29. 1908.
Pennsylvania crude in bbls.	—	—
Pennsylvania crude in bulk	—	—
Residuum, bbls. for export	—	—

CRUDE AT THE WELLS.

The quotations for oil represented by credit balances were ;—

		Week ended	
		Feb. 29. 1907.	Feb. 29. 1908.
Pennsylvania .. ..	.. ..	\$1 63	\$1 78
Tiona .. ..	.. ..	1 73	1 78
North Lima .. ..	.. ..	0 92	1 04
South Lima .. ..	.. ..	0 87	0 99
Indiana .. ..	.. ..	0 87	0 99
Illinois, heavy, below 30 deg. ..	..	—	0 60
Kansas and Indian Ter., 32 deg. and above .. ..	.. ..	0 40	0 41
Heavy .. ..	.. ..	—	0 28
Humble, Tex. .. ..	.. ..	—	0 73
Saratoga .. ..	.. ..	—	0 71
Sour Lake, Tex. .. ..	.. ..	—	0 75
Jennings, La. .. ..	.. ..	—	0 70
CANADIAN OIL :—			
Petrolia .. ..	.. ..	1 32	1 34
Oil Springs, less pipeage .. ..	.. ..	1 39	1 41

REFINED—FOR EXPORT.

	In cents.	Week ended	
		Feb. 29.	S.W. W.W.
Barrels, cargo per gal.	8 75	@ 10 75
Philadelphia	8 70	@ 10 70
Bulk, New York	5 00	@ 7 00
Bulk, Philadelphia	4 95	@ 6 95
Cases, New York	10 90	@ 13 90
Cases Philadelphia	10 85	@ 13 85

REFINED IN CASES—110 FIRE TEST.

		Week ended	
		Feb. 22. 1908.	Feb. 29. 1908.
3,000 to 10,000 .. ..	.. ..	11 05	11 05
1,000 to 3,000 .. ..	.. ..	11 10	11 10

REFINED—JOBGING LOTS

In barrels, pkgs included.

		Week ended	
		Feb. 22. 1908.	Feb. 29. 1908.
120 fire test, S.W. in barrels	.. ..	12	12
130 fire test, S.W. .. ..	.. ..	12 1/2	12 1/2
150 fire test, W.W. .. ..	.. ..	13 1/2	13 1/2
In bulk from tanks .. ..	.. ..	10	10
300 fire test .. ..	.. ..	13 1/4 @ 14	13 1/4 @ 14

NAPHTHA AND GASOLINE.

		Week ended	
		Feb. 22. 1908.	Feb. 29. 1908.
Naphtha, Auto, 66 @ 72 deg. ..	.. ..	14 00	14 00
Gasoline, 86 deg. .. ..	.. ..	23 00	23 00

PENNSYLVANIAN OIL RUNS from Feb. 12th to Feb. 25th were :—Feb. 12th, 210,759; Feb. 13th, 272,861; Feb. 14th and 15th, 368,898; Feb. 16th and 17th, 106,387; Feb. 18th, 182,943; Feb. 19th, 183,269; Feb. 20th, 21st, 22nd, 243,863; Feb. 23rd, 406,410; Feb. 24th, 91,631; and Feb. 25th, 324,078.

THE DELIVERIES OF PENNSYLVANIAN OIL from Feb. 13th to Feb. 26th were :—Feb. 13th, 167,956; Feb. 14th, 169,339; Feb. 15th and 16th, 356,396; Feb. 17th and 18th, 359,971; Feb. 19th, 138,994; Feb. 20th, 165,616; Feb. 21st, 22nd and 23rd, 500,778; Feb. 24th, 324,639; Feb. 25th, 192,422; and Feb. 26th, 195,868.

CLEARANCES FOR THE WEEK.

During the week ended Feb. 28th and since Jan. 1, the clearances of petroleum, in gallons, from the port of New York, were as follows :—

	Week.	Year.	1907.
Refined	14,681,040	82,045,800	88,145,950
Crude	—	1,538,610	737,370
Naphtha	30,100	924,020	1,293,930
Residuum	7,350	566,800	71,550

EXPORT STATISTICS.

The total exports from the port of New York and from the United States have been :—

	Gallons.
From New York, week ended Feb. 28th ..	19,574,720
Total from New York, from Jan. 1st, 1908 ..	124,266,344
Same period last year	118,265,364
Increase	6,000,980
From United States, week ended Feb. 28th ..	38,180,075
Total from United States since Jan. 1st, 1908 ..	228,777,081
Same period last year	208,085,272
Increase	20,691,809

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The "Review" Shipping List.

MARCH 13, 1908.

(The following abbreviations are used in this table:—L. Left; P. Passed; Arr. Arrived; Sp. Spoken; Tr. Trading.)

Vessel.	From.	For.	Latest Date and Position.	Vessel.	From.	For.	Latest Date and Position.
ALCHYMIST	London	Smyrna	At Malta, Mar. 11	EUPLECTELA	Hamburg ..	Rotterdam ..	Arr. Feb. 27
ALEMBIC	London	Lisbon.....	In Downs, Mar. 10	EXCELSIOR	Hamburg and Tyne	New York ..	Arr. Mar. 11
ALICE ISABELLE..	Philadelphia	Sables d'Olonne	P. Del. Break, Feb. 28	EZIO	—	—	Coasting Peru
AMERICAN	New York ..	Puerto.....	Arr. Feb. 23	FRANCE MARIE ..	Philadelphia	Santander ..	P. Del. Break., Feb. 22
APPALACHEE	San Francisco	Saigon.....	L. Feb. 21	GEESTEMUNDE ..	Philadelphia	Copenhagen	L. Mar. 1
APSCHERON.....	—	—	At Trieste, Mar. 11 (to sail April 1)	GENESSE	Manchester	Galveston ..	At New Orleans, Mar. 3
ARAL.....	Hamburg & Tyne	Philadelphia	Arr. Mar. 4	GEORGIAN PRINCE	Philadelphia	Rouen.....	L. Mar. 9
ARAS.....	Penarth	Philadelphia	P. Barry Island, Feb. 25	GOLDMOUTH	Batoum	Singapore ..	L. Suez, Mar. 5
ARGYLL	—	—	Coasting U.S. (Pacific)	GUTHEIL	Hamburg ..	Philadelphia	P. Dunnet Head, Feb. 27
ASHTABULA	San Francisco	Shanghai ..	Arr. Feb. 27	HAINAUT	Antwerp	Alexandria ..	Arr. Mar. 7
ASTRAKHAN.....	Tyne	Philadelphia	P. Nantucket, Feb. 26	HARRY WADSWORTH	Port Arthur (Texas)	Manchester	L. Norfolk (Va.), Mar. 2
ATLAS	—	—	Coasting U.S. (Pacific)	HELIOS.....	Liverpool ..	Philadelphia	L. Feb. 25
AUGUSTA	Philadelphia	Liverpool ..	P. Del. Break., Feb. 26	HELIOS.....	Philadelphia	Flushing....	P. Del. Break., Feb. 29
AUGUST KORFF..	New York ..	Hamburg ..	In Port, Mar. 10	HERMIONE	Tyne	Philadelphia	P. Dunnet Head, Feb. 23
AUREOLE	New York ..	Rotterdam ..	L. Feb. 23	HOTHAM NEWTON	Dunkirk	Sunderland ..	In Port, Mar. 11
AZOV.....	—	—	Trading on W.C. of South Amca.	HOUSATONIC	Barrow	New York ..	Wrecked, Maiden Rock, Jan. 5
BAKU STANDARD	Philadelphia	Havre	P. De'. Break, Feb. 23	IMPERIAL	—	—	Tr. on Lakes btn. U.S.A. and Can.
BALAKANI	Tyne	Batoum	L. Mar. 11	IOANNIS COUTZIS	Batoum	Rouen.....	In Havre Roads, Mar. 10
BATOUM	Rotterdam ..	Tyne	Arr. Feb. 18	IROQUOIS	London & Barry	New York ..	Sp. Mar. 4, 51 N. 16 W.
BAYONNE	Batoum	Naples.....	Arr. Mar. 3	J.B.AUG.KESSLER	Batoum	Colombo....	At Port Said, Mar. 5
BEACON LIGHT ..	Tyne	Port Arthur (Texas)	P. Lizard, Feb. 26	JAMES BRAND	Philadelphia	London	Off the Wight, Mar. 11
BLOOMFIELD	Penarth	Batoum	Arr. Mar. 5	JULES HENRI	New York ..	Marseilles ..	L. Feb. 17
BORJOM	Alexandria..	Batoum	L. Constant'ple, Feb. 24	KURA	Tyne	Kustendje ..	Off Ushant, Mar. 9
BRILLIANT	New York ..	Stettin.....	L. Feb. 23	LA CAMPINE.....	Antwerp	Baltimore ..	Arr. Mar. 5
BROADMAYNE....	Cette	Philadelphia	L. Gibraltar, Mar. 1	LA FLANDRE	Antwerp	Philadelphia	Arr. Feb. 28
BULLMOUTH	Samboe	Yokohama ..	Arr. Mar. 8	LA HESBAYE.....	Batoum	Antwerp	Cld. Constant'ple, Mar. 3
BULYSES	Rotterdam ..	Cardiff	Arr. Mar. 11	LA MADELEINE ..	Algiers	Brest	Arr. June 15
BURGERMEISTER	Philadelphia	Danzig	P. Del. Break, Feb. 25	LA VIGUESA.....	Corunna....	Port Arthur (Texas)	L. Jan. 5
PETERSEN	San Francisco	Shanghai ..	L. Feb. 21	LACKAWANNA....	Bengkalis ..	—	P. Perim, Mar. 9
CALCUTTA.....	Hamburg and Tyne	New York ..	P. Dunnet Head, Mar. 9	LANSING.....	Pt. San Luis	San Francisco	L. Feb. 26
CAPTAIN A. F. LUCAS	Bombay	Aroe Bay ..	L. Mar. 7	LE COQ.....	Philadelphia	Cette	P. Del. Break., Feb. 28
CARDIUM	San Francisco	Astoria or Seattle	L. Feb. 23	LOUTSCH	Batoum	Odessa	L. Jan. 14
CATANIA	—	Port Arthur (Texas)	P. Lizard, Mar. 5	LUCERNA	Bergen	Tyne	Arr. Feb. 29
CAUCASIAN	Tyne	New York ..	Feb. 28	LUCILINE	Dunkirk	New York ..	P. Lizard, Mar. 2
CHARLOIS	Rotterdam ..	London	L. Feb. 28	LUMEN.....	Kustendje ..	Havre	Arr. Mar. 8
CHESAPEAKE	New York ..	Antwerp	P. Sagres, Mar. 9	LUX	Philadelphia	Rouen.....	P. Del. Break., Feb. 26
CHESTER	Batoum	—	Trading on W.C. of South Amca.	MAKKAVEI	Cette	Kustendje ..	L. Mar. 5
CIRCASIAN PRINCE	—	—	Arr. Feb. 16	MANHATTAN	Tyne	New Orleans	Arr. Feb. 26
CLAM	Singapore ..	Buenos Ayre:	Arr. Feb. 19	MANNHEIM	New York ..	Hamburg ..	Arr. Mar. 9
COL. E. L. DRAKE	Seattle.....	Pt. San Luis	L. Singapore, Mar. 4	MARGARETHA ..	London	Batoum	P. Gibraltar, Mar. 5
COWRIE	Aroe Bay ..	Europe	P. O. Hd. Kinsale Feb. 29	MAVERICK.....	Seattle	San Francisco	Arr. Oct. 6
CUYAHOGA	Manchester	Philadelphia	Arr. Mar. 1	METEOR	—	—	At Shanghai, Mar. 6
CYMBELINE	Penarth	Port Arthur (Texas)	L. Algiers, Mar. 4	MEXICAN PRINCE	Kustendje ..	La Pallice or Rouen	P. Havre, Mar. 10
CZAR NICOLAI II.	Batoum	Hamburg ..	P. Sagres, Mar. 10	MIRA	Newport	Falmouth & Port Arthur	Arr. Mar. 1
DAGHESTAN.....	Batoum	Shanghai ..	L. Feb. 28	MUREX.....	Shanghai ..	Tarakan ..	L. Mar. 8
DAKOTAH	Taketoyo ..	San Francisco	In Port, Mar. 11	NARRAGANSETT..	New York ..	London	L. Mar. 1
DELAWARE	Philadelphia	Liverpool ..	P. Dover, Mar. 10	NERITE	—	—	Tr. in China Seas
DEUTSCHLAND ..	New York ..	Rotterdam ..	Arr. Mar. 9	NEW YORK	Southampton	New York ..	In Wireless Com., Brown'd, Mar. 9
DIAMANT	Rotterdam ..	Philadelphia	Arr. Mar. 9	OAKWOOD	London	Cienfuegos ..	L. Mar. 11
EDWARD DAWSON	Hull	N. Orleans..	Arr. Mar. 9	OBERON	Rangoon....	Thameshaven	Arr. Mar. 10
ELAX.....	Samboe	Rotterdam..	Arr. Mar. 6	OCEAN	Amsterdam..	Philadelphia	P. Prawle Pt., Feb. 25
ELISE MARIE	New York ..	Bremerhaven	L. Mar. 3	OILFIELD	Tyne	Philadelphia	P. Dunnet Head, Mar. 6
ENERGIE	Philadelphia	Hamburg ..	In Port, Mar. 10	ORIFLAMME	Philadelphia	Bordeaux ..	P. Del. Break., Feb. 27
ERIVAN	Batoum	Barcelona ..	P. Constant'ple, Mar. 9				
ETELKA	Cette	Genoa	Arr. Feb. 25				

Vessel.	From.	For.	Latest Date and Position.	Vessel.	From.	For.	Latest Date and Position.
OSCEOLA	Barry	Montevideo	P. Madeira, Feb. 23	SEMINOLE.....	San Francisco	Shanghai ..	L. Feb. 24
OTTAWA	Sabine Pass	Queenstown	L. Newport News, Feb. 28	SINGU	—	—	Tr. in East Indies
OURAL	Tyne	Batoum	P. Gibraltar, Mar. 1	SNOWFLAKE.....	Rouen	Newport	In Port, Mar. 11
PALEMBANG	—	—	Tr. East Indies & China Seas	SOYO MARU	San Francisco & Gaviota	Yokohama ..	L. Gaviota, Feb. 12
PAULA	Tyne	New York ..	L. Feb. 24	SPONDILUS	Freshwater..	Europe	P. Gibraltar, Mar. 11
PECTAN	Thameshaven	London	In Port, Mar. 11	STANDARD	New York ..	Swinemunde	L. Feb. 27
PENNOIL.....	Rotterdam ..	Philadelphia	In Tyne, Mar. 11	STROMBUS	Batoum	Hong Kong	Arr. Mar. 3
PERLAK	Singapore ..	Foochow....	L. Jan. 30	SUN	Philadelphia	Avonmouth	At New York, Mar. 7
PHOEBUS	New York ..	Hamburg ..	In Port, Mar. 10	SUNLIGHT.....	Rivadesella..	Swansea	In Port, Mar. 11
PINNA	Gaviota	Yokohama ..	L. Mar. 1	SURAM.....	Penarth	Kustendje ..	P. Gibraltar, Mar. 2
POTOMAC	Tyne	Philadelphia	L. Feb. 28	SUWANEE	Hull.....	Tyne	Arr. Mar. 8
PROMETHEUS....	Rotterdam ..	New York ..	Off the Wight, Mar. 7	SVIET	Odessa	Batoum	L. Feb. 18
PRUDENTIA	Singapore ..	Soesoe	L. Feb. 11	TELENA	Singapore ..	Kobe	L. Mar. 8
QUEVILLY.....	Rouen.....	Philadelphia	L. Feb. 7	TEREK	Amsterdam..	Tyne	Arr. Mar. 8
RION.....	Hamburg ..	Kustendje ..	Arr. Mar. 6	TIFLIS	Antwerp....	Philadelphia	L. Feb. 20
ROCK LIGHT	London	Constant'ple	P. Sagres, Mar. 8	TIOGA	London	Sabine Pass	Arr. Feb. 24
ROMANY.....	London	Malta	At Thameshaven, Mar. 8	TONAWANDA	San Francisco	Chingkiang..	L. Mar. 2
ROSSIJA	Pensacola ..	Bilbao.....	In Port, Mar. 2	TROCAS	Samboe	Balekpappan	L. Mar. 10
ROTTERDAM	Amsterdam..	New York ..	P. Scilly, Mar. 3	TURBO.....	Batoum	Hamburg ..	Ashore Haaks, Jan. 7
RUSSIAN PRINCE	Philadelphia	Galveston & Vera Cruz	Arr. Mar. 8	TUSCARORA	New York ..	Calcutta	P. Perim, Mar. 3
SALAHADJI	—	—	Tr. Sts. Settlements and Java Seas	TWINGONE	Rangoon....	Madras	Arr. Dec. 12
SAN CRISTOBAL..	Rouen.....	Grimsby	Arr. Mar. 7	VEDRA.....	Singapore ..	Yokohama ..	L. Mar. 3
SAN IGNACIO	Philadelphia	Pasages	Arr. Feb. 15	VILLE DE DIEPPE	Philadelphia	Rouen	P. Del. Break., Feb. 27
DE LOYOLA	—	—	—	VOLUTE	Sydney	Newcastle ..	Arr. Feb. 24
SAXOLEINE	Philadelphia	Calais	P. Del. Break., Mar. 2	WASHINGTON....	Hamburg ..	New York ..	L. Mar. 10
				WEEHAWKEN	Sunderland	Kustendje ..	L. Mar. 9
				WILLKOMMEN....	Stettin.....	New York ..	L. Tyne, Feb. 26
				WINNEBAGO	San Francisco	Amoy & Canton	At Hong Kong, Feb. 12

Latest Market Intelligence.

LONDON OIL MARKET.

Supplied by Messrs. Benjamin & Gee, 31, St. Mary Axe, E.C.

March 13th, 1908.

The price of Petroleum is unaltered since our last report, quotations being:—Russian, 5½d. to 6d.; American, 6½d. to 6¾d.; Water White, 7½d. to 7¾d.; Roumanian, 6¾d.

LUBRICATING OILS.

The latest quotations are:—

- American pale, £7 7s. 6d. to £11.
- American dark cylinder, from £9 2s. 6d.
- American filtered cylinder, from £11 15s.
- No. 1 Russian, £10 5s.

TURPENTINE.

American Turpentine has been fluctuating as usual, being one day firm and the next day dull. The current price for Spot is 36s. 9d., and for delivery up to the end of the year 37s.

LIVERPOOL OIL MARKET.

March 12th.

Refined oils are quiet, and sellers quote 6¾d. for Russian, Galician or Roumanian; and 7¼d. to 8¼d. per gallon for American.

PETROLEUM SPIRIT continues at 1s. 0½d. to 1s. 3d. per gallon for American deodorised, according to quality on the spot.

LATEST AMERICAN PRICES.

NEW YORK, March 12th.

Refined, in cases, is steady at 10·90; Standard White, 8·75; Credit balances, 1·78c.

PHILADELPHIA, March 12th.

Standard White is still quoted at 8·70.

RUSSIA.

BAKU, March 9th.

The Baku oil market is firm. Crude oil, spot, 27¾ copecs per pood. Residuals, spot 28 copecs. Kerosene, in ships, delivery February-March, 32½ copecs.

BELGIUM.

ANTWERP, March 7th.

The petroleum market is firm. Price of Standard White, spot, 22 francs per 100 kilos.

FRANCE.

PARIS, March 7th.

Illuminating oil is quoted in bulk, in whole tank waggons, 21 francs per hectolitre; spirit, 31·75 francs per hectolitre. Special white oil, in barrels or cans, 29 francs per hectolitre.

GERMANY.

HAMBURG, March 7th.

The kerosene market is quiet. The price of American Standard White is 7·55 marks per 50 kilos; Russian, 7·35 marks.

ROUMANIA.

March 2nd.

Crude oil from different fields, including pipe line charges, per 100 kgs.	Frans.
Refined oil, exclusive of taxes	4·30-4·40
Benzine, 717-720, including taxes	6·00-6·50
Benzine, 750-760	20·00
Residuals in tank waggons, at refinery	14·00
Paraffin	3·90-4·00
	120·00-125·00

PRICES FOR EXPORT.

Refined oil in tank waggons, per 100 kgs.	6·50-7·00
Benzine, sp. gr. 0·710-0·715, f.o.b.	20·00-21·00
" sp. gr. 0·715-0·720	16·00-17·00
" sp. gr. 0·730-0·740	12·50-13·00
" sp. gr. 0·745-0·755	11·00-12·00

INDIA.

BOMBAY, February 21st.

Standard Oil Co., of New York.

Current rates are:—

American, "Snowflake," 150 deg.	Rs. 6 4 2
" Chester, 76 deg.	4 12 2
" Monkey Brand, 76 deg.	4 4 2
" Bulk, 125 deg. (in local made tins)	3 13 6
" " 125 deg. (8 Imperial gallons)	3 3 6

The Asiatic Petroleum Company, Limited.

Current rates are:—

Burmah oil, in tins, per pair	3 8 0
Russian "Rising Sun," bulk, per unit	3 6 0
" " tins, per pair	4 0 0
" Anchor" per case	4 8 0

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IMPORTS of PETROLEUM into UNITED KINGDOM

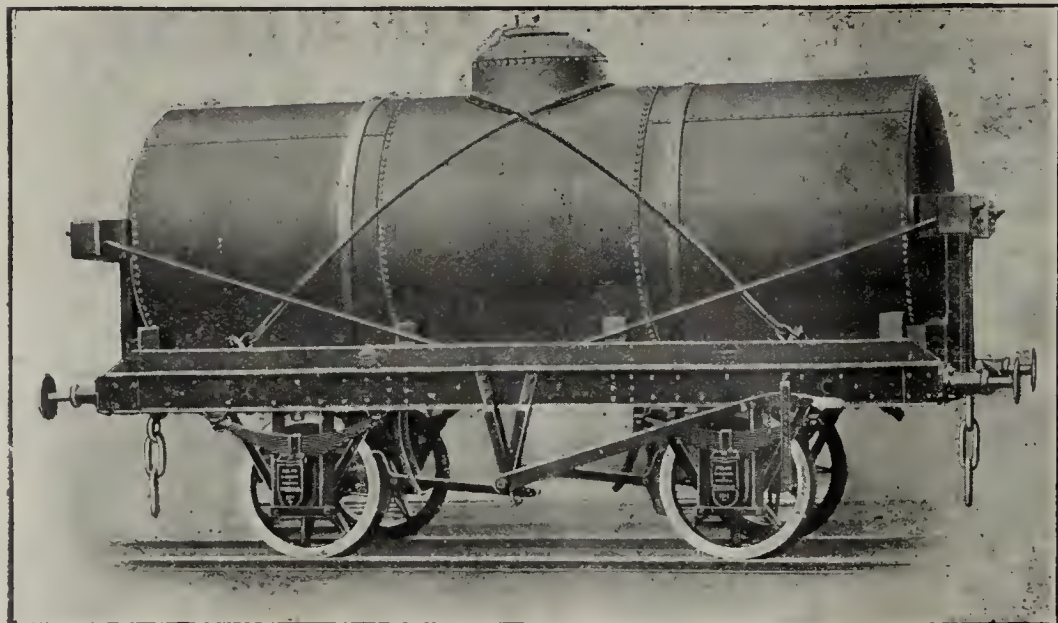
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FOR THE WEEK ENDED 2ND MARCH, 1908—

DATE.	PORT AND IMPORTERS.	DESCRIP- TION.	NO. OF GALS.	PORT WHENCE.
Feb. LONDON—				
25	Wilkins, Campbell and Co.	Lub.Gr.	480	Antwerp
27	Page, Son and East	..	280	..
27	T. H. Lee	Lub.	460	Hamburg
27	London and India Dock Co.	..	80	..
27	C. Price and Co. .. ..	..	8,000	Cape Town
27	W. H. J. Alexander.. ..	..	2,250	Philadel.
28	Worthington and Boler .. ..	..	7,800	..
28	A. Brown and Co. .. ..	..	3,400	..
28	J. Owen .. ..	..	2,220	Rotterdam
29	Craven and Co. .. ..	..	40	Hamburg
29	R. South	Tar Oil	160	Stockholm
29	Lubricating & Fuel Oils, Ltd.	Lub.	6,150	Philadel.
29	Juett and Cain .. ..	..	4,800	..
29	Mercantile Lighterage Co...	..	10,500	..
March				
2	Lubricating & Fuel Oils, Ltd.	..	4,920	..
2	Juett and Cain .. ..	..	5,200	..
2	Page, Son and East .. ..	..	120	Antwerp
2	Anglo-American Oil Co. .. ..	..	1,000	Dunkirk
2	London and India Dock Co.	..	3,600	Hamburg
Feb. LIVERPOOL—				
25	C. W. Field .. ..	..	200	Antwerp
25	W. B. Dick and Co. .. ..	..	4,100	New York
28	Mordaunt Bros. .. ..	..	260	..
28	Pickfords, Ltd. .. ..	..	200	Hamburg
28	Meade-King, Robinson & Co.	..	3,000	Baltimore
March				
2	.. ..	..	2,600	..
2	W. Gibson and Sons	Lamp	2,050	Boston
2	Cunard Steamship Co.	Lub.	500	New York
2	Valvoline Oil Co. .. ..	..	18,750	..
2	Ismay, Imrie and Co. .. ..	..	400	..
2	Vacuum Oil Co. .. ..	..	11,360	..
2	.. ..	..	3,000	..
2	J. T. Fletcher and Co.	Lub. Gr.	280	Antwerp
Feb. BRISTOL—				
28	E. Stock and Sons	Lub.	2,030	Hamburg
CARDIFF—				
28	Carr and Co... ..	..	2,090	New York
GRIMSBY—				
27	J. Sutcliffe and Son .. ..	..	80	Antwerp
WEST HARTLEPOOL—				
28	W. Hartlep'l Steam Nav. Co.	..	320	Hamburg
HULL—				
25	W. Gilyott and Co... ..	..	75,880	New York
25	Thos. Wilson, Sons and Co.	..	149,600	..
27	.. ..	..	90	Bergen
27	.. ..	..	4,320	Antwerp

DATE.	PORT AND IMPORTERS	DESCRIP- TION.	NO. OF GALLS.	PORT WHENCE.
Feb.				
27	Wilsons and N.E. Railway Shipping Co.	Lub.	200	Antwerp
27	.. ..	..	1,000	Hamburg
28	.. ..	..	350	..
28	.. ..	..	1,240	Antwerp
MANCHESTER—				
25	G. B. Taylor	Lub. Gr.	500	Hamburg
25	D. Currie and Co.	Lub.	120	..
27	Pickford's, Ltd. .. ..	..	30	..
27	Geo. B. Taylor .. ..	..	120	..
27	.. ..	..	219,800	New York
27	Lamport and Holt .. ..	..	2,120	..
27	Meade-King, Robinson & Co.	..	5,200	..
28	Bramwell, Fern and Co.	..	1,850	..
28	Diamond Lubricating Co...	..	2,400	..
NEWCASTLE—				
25	Tyne-Tees S.S. Co. .. ..	..	4,160	Antwerp
PLYMOUTH—				
27	Bristol Steam Nav. Co.	Lub. Gr.	200	Rotterdam
SWANSEA—				
28	Burgess and Co.	Lub.	230	Hamburg
GLASGOW—				
27	Anchor Line .. ..	..	41,770	New York
27	Donaldson Bros. .. ..	..	2,600	Baltimore
GRANGEMOUTH—				
25	Hopkins, Paton and Co. .. ..	..	560	Antwerp
25	J. Currie and Co. .. ..	..	720	Hamburg
25	W. Graham-Yooll and Co...	Lamp	1,520	..
27	J. Currie and Co.	Lub.	3,040	..
27	.. ..	..	5,960	..
LEITH—				
27	J. Currie and Co. .. ..	..	2,280	..
27	.. ..	..	360	Bremen
BELFAST—				
27	J. C. Pinkerton and Co. .. ..	..	700	Hamburg
27	G. Heyn and Sons	Kerosene	16,800	N. Orleans
Total for Week			657,900	
Deduct to correct :—				
BARROW—				
24/1	Anglo-American Oil Co. (Delaware)	Naph.	1,260	New York
24/1	Benzine	19,270	..
24/1	Lamp	21,350	..

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For several years past have been working under Agreements with some of the principal American and Russian Syndicates, but are now entirely free from any working Agreements, and having a very large and old established connection amongst the largest consumers and dealers in this country are open to negotiate with any large Refiners or Syndicates to represent them, and distribute their Products for them, or buy direct from them, as may be desired.

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Ample references will of course be furnished. Correspondence solicited.

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TIN PLATES
FOR ALL PURPOSES.

Agents for the "CASTELL"
brand of Tin Plates made from
Best Welsh Soft Siemens-Martin Steel.
No imported steel used.

QUOTATIONS ON APPLICATION.

FOR THE WEEK ENDED 9TH MARCH, 1908—

DATE.	PORT AND IMPORTERS.	DESCRIPTION.	NO. OF GALLS.	PORT WHENCE.
Mar.	LONDON—			
3	Fielder, Hickman and Co...	Lub.	18,560	New York
3	Anglo-Saxon Oil Co.	Fuel	600,000	Pt. Arthur
	(Pectan)			
3	"	"	576,000	"
4	London and India Docks Co.	"	80	Colombo
4	R. Park and Co.	Lub.	420	Marseilles
4	Livett Frank and Son	"	800	Philadel.
4	Mordaunt Bros.	"	6,200	"
4	Bowring Petroleum Co.	"	7,000	"
5	E. J. Walkinshaw	"	12,000	"
5	Union Lighterage Co.	"	22,500	"
5	Wilkins, Campbell and Co.	Lub. Gr.	1,600	"
5	Webber, Smith and Hoare	"	1,400	"
5	T. H. Lee	"	240	Hamburg
5	Page, Son and East	Lub.	960	Antwerp
6	G. Hallett and Co.	"	240	"
6	Scott's Wharf	"	12,000	New York
6	J. W. Cook and Co.	"	3,960	"
6	London & India Docks Co.	"	5,480	"
7	Anglo-American Oil Co.	"	126,960	"
7	Fielder, Hickman and Co.	"	2,600	"
7	G. Jennings	Lub. Gr.	80	Antwerp
9	Page, Son and East	Lub.	480	"
9	Schenker and Co.	"	610	"
9	T. H. Lee	"	190	Hamburg
9	Anglo-American Oil Co.	"	74,400	Philadel.
9	"	M. Colza	20,000	"
9	Livett Frank and Son	Lub.	800	New York
	LIVERPOOL—			
3	J. T. Fletcher and Co.	Lub. Gr.	50	Antwerp
3	Meade-King, Robinson & Co.	Lub.	2,000	Hamburg
3	Co operative Wholesale Soc.	"	40	Rouen
3	G. B. Taylor	"	97,400	New York
3	E. H. Kellogg and Co.	"	3,200	"
4	Bramwell, Fern and Co.	"	1,130	"
4	Pickford's, Ltd.	L. Paste	270	Hamburg
4	Meade-King, Robinson & Co.	Resid.	24,000	Antwerp
5	Worthington and Boler	Lub.	3,600	Philadel.
5	W. B. Dick and Co.	"	41,130	"
6	Crew, Levick and Co.	"	25,370	"
6	"	M. Colza	4,160	"
6	Meade-King, Robinson & Co.	Lub.	66,400	"
6	"	"	7,800	Baltimore
7	American Line	"	42,800	Philadel.
7	Geo. B. Taylor	"	79,600	"
7	Bowring Petroleum Co.	"	760	"
9	Anglo-American Oil Co.	Lamp	883,330	"
	(Delaware)			
9	Liverpool Storage Co.	Lub.	102,880	New York
9	"	M. Colza	4,000	"
9	Vacuum Oil Co.	Lub.	3,400	"
9	C. W. Field and Co.	"	210	Antwerp
9	Meade-King, Robinson & Co.	Spirit	39,000	Rotterdam
	BRISTOL—			
3	Pickfords	Lub.	580	Hamburg
3	First Anglo-Russian Oil Co.	Resid.	2,320	"
3	W. Smith and Co.	Lub.	16,800	New York
4	H. R. James and Sons	"	7,600	"
4	"	M. Colza	2,000	"
5	E. Stock and Sons	Lub.	2,000	Hamburg
5	First Anglo-Russian Oil Co.	Resid.	2,330	"
6	"	Lub.	2,610	New York
6	Anglo-Bosphorus Oil Co.	"	1,200	"
6	H. Pritchard and Co.	"	5,000	"
6	H. R. James and Sons	"	12,600	"
6	"	M. Colza	4,000	"
6	W. Smith and Co.	Lamp	6,000	"
6	"	Lub.	33,200	"

DATE.	PORT AND IMPORTER.	DESCRIPTION.	NO. OF GALLS.	PORT WHENCE.
Mar.	CARDIFF—			
3	Meade-King, Robinson & Co.	Lub.	2,600	Baltimore
	GRIMSBY—			
3	J. Sutcliffe and Son	"	400	Hamburg
5	"	"	40	"
5	"	"	120	Antwerp
	WEST HARTLEPOOL—			
3	West Hartlepool S.N. Co.	"	440	Hamburg
	HARWICH—			
5	D. Howard	"	120	Antwerp
	HULL—			
5	Wilsons and N.E. Railway Shipping Co.	"	1,160	"
5	"	"	1,000	"
5	"	"	320	Hamburg
5	"	"	1,500	"
5	Anglo-American Oil Co. (Suwanee)	Lamp	705,140	Philadel.
5	"	Gas	252,600	"
5	T. Wilson, Sons and Co.	Lub.	30,880	New York
	MANCHESTER—			
3	D. Currie and Co.	"	640	Hamburg
5	Schofield and Co.	"	500	"
5	J. T. Fletcher and Co.	"	830	Antwerp
5	Crew, Levick and Co.	"	8,350	Philadel.
5	"	M. Colza	10,270	"
5	Liverpool Storage Co.	Lub.	15,800	New York
5	George B. Taylor	"	99,600	Philadel.
7	Meade-King, Robinson & Co.	"	31,280	"
7	"	M. Colza	4,000	"
9	C. H. Morton and Sons	Lub.	800	"
9	D. Currie and Co.	"	640	Hamburg
	NEWCASTLE—			
5	Tyne-Tees Steamship Co.	"	240	Antwerp
5	"	"	3,920	"
	NEWPORT—			
6	Mordey, Jones and Co.	Lub. Gr.	330	"
	SUNDERLAND—			
3	Anglo-American Oil Co. (Weehawken)	Lamp	1,031,770	Philadel.
	ABERDEEN—			
5	R. Connon, Reid and Co.	"	1,200	Hamburg
	GLASGOW—			
4	J. and A. Allan	M. Colza	12,000	Philadel.
4	"	Lub.	87,560	"
4	Clyde Shipping Co.	"	240	Antwerp
	GRANGEMOUTH—			
6	W. Graham-Yooll and Co.	Lamp	4,800	Hamburg
6	J. Currie and Co.	Lub.	2,000	"
6	"	Tar Oil	480	"
6	"	L. Paste	290	"
	LEITH—			
3	G. Gibson and Co.	Lub.	240	Boulogne
3	"	"	2,480	Antwerp
3	W. Graham-Yooll and Co.	Lamp	3,360	Hamburg
5	J. Currie and Co.	Lub.	8,200	Stettin
5	"	"	960	Hamburg
5	Henderson and McIntosh	"	8,400	Philadel.
	BELFAST—			
4	Anglo-American Oil Co. (Delaware)	Lamp	387,710	"
5	J. C. Pinkerton and Co.	Lub.	280	Hamburg
	Total for Week	"	5,751,820	
	Total for the Fortnight	"	6,409,720	
	Deduct to correct—			
	LONDON—			
7/2	Homelight Oil Co. (Bloomfield)	Lamp	488,700	Batoum
10/2	"	"	27,150	"

Telegraphic Address:—"OLEINE."

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The Petroleum Review.

By PAUL DVORKOVITZ.

Vol. XVIII. (New Series.)

MARCH 28TH, 1908.

No. 421.

THE PETROLEUM REVIEW:

The ANNUAL SUBSCRIPTION for both English and Foreign Readers is 26s., including Postage. Single Copies may be had at the offices at 1s.

The Editor would esteem it a favour if readers, when communicating with the various firms advertising in our pages, would mention the "Review."

Contributions upon items of interest are always welcomed from subscribers, but in each case these should be accompanied with the name and address of the sender, not necessarily for publication.

Editorial Notes.

The Grosny Oil Fields during 1907. The Grosny oil field has made considerable steady progress during the past year, though at first this may not appear to be the case, inasmuch as the production for 1907 is only about 1,000,000 poods in excess of that for the previous year. The analysis of the figures, however, discloses the fact that though there has been a great decrease in the production of oil by spouters, the total yield by baling has increased steadily throughout the year. This is a very good sign, as a field cannot be said to be thoroughly under commercial exploitation when a large percentage of its total production comes from fountains which may be only of very short duration. The field came into prominence exactly fifteen years ago, at which time two wells were completed, one of them having a yield of no less than 800,000 poods per day, while not long afterwards another flowed at double this rate for some time. Altogether, it may be taken that approximately 350,000,000 poods have been produced by the field, and to-day everything points to the fact that during the present year, the production will enormously increase. As our readers are aware, the second largest producing company in the field is the Spies Petroleum Co., whose total production last year was about 7,000,000 poods, the chief producer—Akhverdoff—having a twelve month's yield of 18,000,000 poods. But the last two months has materially changed the position of the Spies Co., for the two fountains which have been struck on their property, have brought the production up to an extent which must surpass the most sanguine hopes of both directors and shareholders. At the present time, at all events, the Grosny field is giving a very good account of itself.

Oil Prospects in South Africa. One of the most interesting articles which we have published for some time will be found upon other pages of this issue dealing with the oil prospects of South Africa. It is from the pen of Mr. M. J. Stephan, a gentleman who has spent a considerable portion of time in surveying the various

areas from a geological point of view, and deals in a most comprehensive manner with the petroleum indications in the various districts believed to be commercially petroliferous. We have no doubt that the article will be read with great interest by many readers, especially those associated with South Africa.

The Mid-Continent Oil Producers' Association.

The first annual meeting of the Mid-Continent Oil and Gas Producers' Association was recently held at Tulsa, Oklahoma, and was a great success from every point of view. The members present numbered over 500 and represented about 50,000 acres of proven oil territory, and an investment of nearly \$100,000,000, which gives employment to 45,000 men. The most important resolution submitted to the members was one dealing with transport facilities. It was pointed out during the discussion that the present market price for Mid-Continent crude petroleum was not sufficient to be remunerative, except where the oil was produced from large wells with adequate pipe line facilities, and inasmuch as there was a large portion of the producing territory where proper pipe line facilities were not in existence, the association agreed to draft a proper pipe line bill and present it directly to the Congress.

Matters in the Galician Fields.

The building of many storage tanks for petroleum, which has become necessary owing to the rapid increase in the crude oil production in Galicia, has had an appreciable effect upon the market in sheet iron; in fact, we learn that the demand for oil tanks is so great in Galicia that it cannot be readily satisfied. The over-production of crude oil has created a difficult position for the producing firms, as they had not sufficient tanks in which to store the oil, but these had to be created as quickly as possible to avoid greater calamities to the industry. The necessities of the situation even gave rise to some wild talk about buying storage tanks at Baku, which have become superfluous owing to the shrinkage in output—break them up and bring them over to Galicia. In the end, however, the simpler way of ordering tanks in Austria was decided upon. This situation has brought about a very great demand for tanks, which the rivalry between the Vacuum Oil Co. and the other Austrian refiners only served to enhance. Both sides in their anxiety to be fully armed for the struggle are ordering tanks as fast as they can. The manufacturers of iron plates and tank builders in the meantime are reaping a golden harvest.

February in the American Oil Fields.

An all-round decline in field operations is the chief characteristic of the American field statistics for February—the shortest month of the year. Fewer wells were completed, and the new production dropped off considerably—the decline in this respect being over 10,000 barrels. The

Mid-Continent fields held up very well, but what little advancement they made in production was more than counterbalanced by the decline in all fields east of the Mississippi. In the Pennsylvanian regions, though the operations were very slow, one gratifying feature is the increased average yield of the completed wells. This was for the month over 13 barrels per day per new well, as against a daily average of new wells for the same month a year ago of 12 barrels, while a few months ago we recollect the daily average of new wells as low as eight barrels.

PRESENTATION TO THE HOMELIGHT OIL COMPANY'S GENERAL MANAGER.

On Saturday last a pleasing ceremony took place at the Manchester office of the Homelight Oil Co., Ltd., when Mr. G. H. Watson (who has succeeded the late Mr. J. B. McClurg in the managership of the company), was presented by the branch staff with a carved oak case clock and a smokers' cabinet. The presentation was made by Mr. W. Chapman, who, in a brief speech, referred to the kind feelings which prompted that presentation on the part of the Manchester staff to their former manager. Mr. Watson then feelingly acknowledged the gift in a few well chosen words, and the proceedings terminated with hearty cheers and good wishes for the future health and success of the new general manager of the company.

THE TIN PLATE MARKET.

Messrs. Norton, Owen & Co., of 4, Bishopsgate Street Within, London, E.C., report under date March 26th, 1908, as follows:—

Owing to the rapid advance in the price of tin, tin-plate makers have been compelled to put up their prices to cover increased cost. For fairly early delivery we make prices of oil sizes as under, but makers are unwilling to sell for forward delivery unless at enhanced rates, and as many works are well booked for some months ahead, the market is in a sound position:—

1c	18 $\frac{3}{4}$ × 14	124 sheets	110 lbs.	12/9 per box.
1c	19 $\frac{1}{4}$ × 14	120 "	110 "	12/9 "
1c	20 × 10	225 "	156 "	18/0 "

F.o.b. Wales. Tin lining and iron hooping extra.

LONDON OIL SHARE MARKET.

FRIDAY, MARCH 27TH, 1908.

Business in the oil section of the Stock Exchange is still very restricted, and, with very few exceptions, there has been no business done. The tone of the market, however, shews some improvement. At the moment, Spies Petroleums are receiving some attention, the recent success of this firm in striking two productive fountains having sent up shares very steadily since the first news was received. Since our last issue they have hardened, and are now quoted $\frac{7}{16}$ to $\frac{1}{2}$, business having been done at 9s. 3d. The turn of events in connection with the Baku Russian Co. has not materially affected the Ordinaries, though they are becoming firmer, dealing having taken place at 1s. 6d. The Preferences seem the favourite script just now, and during the past few days an advance of 1s. has been recorded. Apart from these improvements, the market is very slack, and quotations are about on a par with those published in the REVIEW a fortnight ago. The latest prices will be found upon page 182.

A NEW COMPANY.

Oil Rivers Syndicate, Ltd.

Registered with a capital, £10,000, in 9,980 ordinary shares of £1 each and 400 founders' shares of 1s. each. Objects, to acquire lands, farms, mines, and mineral, bituminous, oil, or other properties in Africa or elsewhere, and to carry on the business of refiners and producers of oil, petroleum, and other minerals, miners, prospectors, etc. Registered office, 59 and 60, Cornhill, E.C.

THE ANGLO-RUSSIAN PETROLEUM COMPANY, LIMITED.

The sixth ordinary general meeting of the Anglo-Russian Petroleum Co., Ltd., held on Thursday, at River Plate House, Finsbury Circus, E.C., was, on the motion of the chairman (Mr. Philip Poore), adjourned until April 23rd next.

THE OPERATIONS OF THE BAKU REFINERIES.

STATISTICS FOR JULY, 1907 (in poods).

I.—MANUFACTURE OF ILLUMINATING OILS.

Distillation.

Submitted to Distillation.			Products Received.						
	Crude.	Other Products.	Total.	Kerosene.	Residuals.	Other Products.	Loss.	Fuel used.	
July	28,099,361	302,044	28,401,405	8,015,815	18,356,219	1,234,789	794,582	834,772	

Refining.

Submitted to Refining.			Refined Products Obtained.				Chemicals used.	
	Kerosene	Other Distillates.	Total.	Kerosene	Other Products.	Total.	Loss in Refining.	Acid. Soda.
July	8,867,410	6,993	8,874,403	8,630,548	4,537	8,635,085	239,318	31,923 12,711

II.—MANUFACTURE OF LUBRICATING OILS.

Distillates Received.

	Machine Oil.	Spindle Oil.	Cylinder Oil.	Goudron.	Solar Distillates.	Residuals.	Other Distillates.	Loss in Distilling.	Fuel used.
July	1,365,532	133,991	104,119	1,789,506	652,741	645,627	71,910	670,543	645,725

Refined Products Received.

	Spindle Oil.	Machine Oil.	Cylinder Oil.	Loss in Refining.	Chemicals used.	
					Acid.	Soda.
July	8,409	118,377	—	1,284,725	24,068	2,517

III.—MANUFACTURE OF BENZINE.

	Gasoline Submitted to Distillation.	Distillates Obtained.			Loss in Distilling.	Refined Benzine Obtained.	Loss in Refining.
		Benzine.	Heavy Gasoline.	Kerosene.			
July	59,046	51,208	5,539	—	2,399	26,930	1,190

THE OIL FIELDS OF GROSNY.

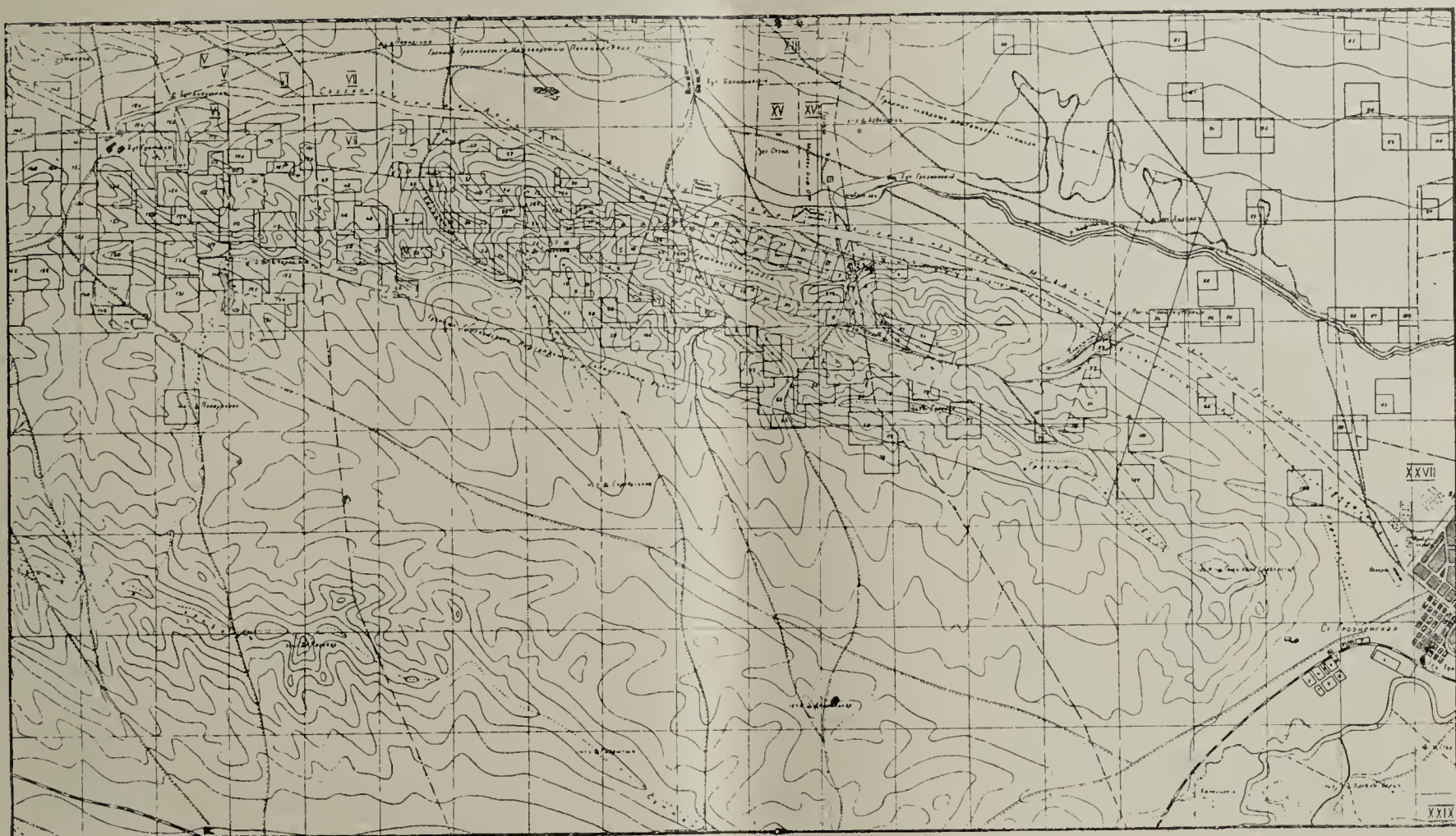
AN INTERESTING DESCRIPTION OF THE TERRITORY.

Mr. E. Youschkin, one of the most competent authorities on the Grosny petroleum industry, in an appeal to the authorities published in the recent issue of the *Trade and Industry Gazette*, for a more rational policy in dealing with the Grosny petroleum industry, gives the following interesting facts relating to the condition of the Grosny oil fields.

From 1893, when drilling was first begun in the Grosny district, up to the present time, 60 plots have been developed, situated on the Grosny hill range and in the Alkhan-Yurt valley. Altogether 332 wells have been drilled to varying depths up to 2,912 feet. Owing to the fact that the first investigations have established

proportion of abandoned boreholes, namely 68, out of a total of 332 wells drilled.

The parcelling out of plots to be leased out by auction out of the official petroliferous area (and not the actual one) was, and still is, carried out without any regard to the actual results of boring operations in the fields, and plots were repeatedly offered as proven petroliferous where it would be necessary to drill through an overlying series of almost perpendicular strata in order to reach oil at an unattainable depth. Among this series are all the northern plots under Nos. 1 to 5, 9 to 11, 16 to 21, 29 to 37. Borings were carried out on the following of these plots: Nos. 3, 4, 16 and 19. After three wells



PLAN OF THE FIELD SHEWING LOCATION OF THE PLOTS.

the extent of the petroliferous area only in a general way, and the area declared officially as proven petroliferous is much larger than the really petroliferous zone, and was further extended to the north and not to the west, the following state of affairs was created:—

The western part of the Grosny range, turned into a prospecting field, was proved petroliferous as far back as 1899, but this notwithstanding continues to be treated officially as a field open to prospecting claims.

The whole of the northern slope of the Grosny range almost right up to the water dividing line and the whole of the Alkhan-Yurt valley cannot in any case claim to be petroliferous, but already in 1897 this vast area was declared officially as proven petroliferous and is treated as such to the present day.

The result of the above conditions was that out of a total of 60 plots which were taken up for exploitation 16 have already been abandoned, having shewn no traces of oil and for the same reason there is such a large

drilled fruitlessly on the plot of the First Grosny Co., which is identical, have proved the hopelessness of seeking for oil in this direction. At the same time the drilling of three deep wells on the privately-owned plots of Nazarov and Uvaroff in the Alkhan-Yurt valley confirmed the views previously held by competent people of the small width of the petroliferous zone. All these circumstances, as well as the first mistakes, somewhat discredited the Grosny oil fields.

According to the official designation the petroliferous area of the Grosny oil fields is 4.5 versts by 8 versts = 36 square versts or 3,750 dessatines, but the results of borings and later geological investigations have fixed the petroliferous area at a length of 11.5 versts and a width of 0.5 versts. The proven petroliferous area at Grosny may be taken to be 5.75 square versts or 570 dessatines, which is six times smaller than the official petroliferous area. The width of the zone is clearly defined by the northern line, but it may be increased by pushing further

south the southern line, but only to a slight extent. The length may, and probably will, be increased by extension to the east beyond plot No. 151 of the Executors of Maximoff, and to the west beyond plot No. 42 of Mr. MacGarvey, but such extensions to south, east or west, whilst necessitating an increased depth of drilling to 3,000 and 3,500 feet will only slightly increase the workable area of the oil fields.

The western limit of the official proven petroliferous area divides the real petroliferous area longitudinally into almost equal halves, the western field open to prospectors' claims, and the eastern field, which is leased out by auction. Both these fields stretch out along the axis of the anticlinal and their largest part is situated on the southern slope of the anticlinal, going over only slightly on the northern slope. The petroliferous area is far from fully utilised in its length and not quite fully in its width. Free unutilised spaces are to be found both in the declared petroliferous as well as in the prospecting area. From the point of view of the interests of the Terek Cossack army, the owner of the Grosny lands, which has earned millions of roubles on the Grosny petroleum industry, the greatest importance for the future attaches to the officially declared petroliferous area, which the army can parcel out in plots and lease it out by auction against royalties much higher than the 1 to 1½ copecs only which can be levied on the prospecting lands. The failure to declare at the proper time the prospecting area as proven petroliferous, has materially reduced the revenues of the

army from half of the petroliferous lands. It is too late to do so now, when practically the whole of the available area has already been taken up by prospectors.

Conditions, however, are different in the eastern part of the fields. There the army can obtain a larger revenue than it is now getting by leasing out by auction 10 dessatine plots of the land in which at least half should be not merely officially but really proven petroliferous. The latest auctions in 1900 included some plots which were petroliferous only in name, and since then nothing has been done to bring fresh lands into exploitation. In this respect the greatest attention has deservedly been attracted to the so-called Glouchkoff tract of 100 dessatines, the northern half of which is outside the really petroliferous zone. In a previous issue of the REVIEW we referred to the protests of all competent people, including Mr. Youschkin against the policy adopted by the army council of cutting this tract up into 10 plots in such a manner that five of the plots would be within the petroliferous zone and five quite outside of it. The chief mining engineer of the Terek army admitted that five of the plots would probably be unproductive, and notwithstanding this the authorities propose to offer these plots for lease as petroliferous land against royalties and a minimum obligatory production of half-a-million poods per annum each.

The following table shews the various firms operating in the fields, the number of their producing wells, and last year's production of each company:—

	No. of Plot.	Name of Firm.	Total number of wells.	Number of producing wells.	Production. Poods.
1	15	Maximoff Executors	3	1	182,800
2	28	Spies Petroleum Co., Ltd.	2	1	302,870
3	14	"	1	—	none
4	27	"	2	1	46,560
5	13	"	1	1	23,310
6	26	Maximoff Executors	3	1	55,450
7	Unnumbered	Moscow Co.	11	7	400,400
8	"	Anglo-Russian Maximoff Co., Ltd.	21	15	6,560,906
9	8	Maximoff Executors	1	1	none
10	977	Akhverdoff Co.	18	16	5,509,500
11	Unnumbered	"	12	7	1,741,300
12	7	Maximoff Executors	3	1	465,490
13	22	Akhverdoff Co.	6	3	6,362,400
14	23	"	9	9	2,050,700
15	24	"	9	6	819,500
16	25	"	6	4	412,000
17	40	Spies Petroleum Co., Ltd.	7	7	1,208,520
18	39	Kasbeck Syndicate, Ltd.	6	5	929,300
19	38	Akhverdoff Co.	2	1	36,200
20	976	St. Petersburg Co.	10	6	318,400
21	975	Akhverdoff Co.	12	12	1,230,600
22	43	Spies Petroleum Co., Ltd.	2	2	173,005
23	41	Russian Standard	1	1	6,753
24	11	Tcheleken-Daghestan Co.	4	4	155,585
25	13	"	10	8	1,112,847
26	10	Russian Standard	13	12	680,165
27	15	Spies Petroleum Co., Ltd.	14	13	1,060,265
28	16	"	8	8	243,290
29	168	Vladicaucasian Co.	1	1	720
30	163	Spies Petroleum Co., Ltd.	16	16	1,021,150
31	19	"	6	4	586,760
32	166	Kholodovski	3	1	22,448
33	12	Kasbeck Syndicate, Ltd.	4	4	277,490
34	165	North Caucasian Oil Fields, Ltd.	12	10	1,330,260
35	24	Spies Petroleum Co., Ltd.	1	1	3,215
36	26	Caspian and Black Sea Society	3	2	280,200
37	169	Kasbeck Syndicate, Ltd.	3	3	591,580
38	25	Russian Standard	1	1	24,250
39	31	Caspian and Black Sea Society	2	—	none
40	32	Spies Petroleum Co., Ltd.	9	7	2,060,505
41	33	Russian Standard	1	—	none
42	37	MacGarvey	2	—	none
43	36	Russian Standard	3	1	264,375
44	32b	Spies Petroleum Co., Ltd.	1	—	none
45	40	Kasbeck Syndicate	1	—	none
46	32	Spies Petroleum Co., Ltd.	1	—	none
47	49	Tcheleken-Daghestan Co.	1	—	none
48	42	MacGarvey	1	—	463,508
49	47	North Caucasian Oil Fields, Ltd.	1	—	none
50	Unnumbered	MacGarvey	1	—	none

To Restrict Prospecting for Petroleum in the American Fields.

A BILL TO PROHIBIT EXPLOITATION EXCEPT UNDER LICENSE.

A bill has recently been introduced in the Senate at Washington, having the approval of the President of the United States and the Secretary of the Interior, which will, if it becomes law, considerably restrict prospecting for petroleum in the American fields. It is therefore arousing the greatest interest throughout the industry and the developments in connection with it are being keenly followed.

The bill which has been introduced by Mr. La Follette provides that all public lands containing oil, gas, asphalt, coal, etc., shall be reserved from entry and sale subject to the provisions of the proposed law. The second section of the bill defines those who may obtain licenses to exploit oil, gas and other deposits and expressly excludes all common carriers and all associations, any member of which is interested in the business of a common carrier. This section is as follows:—

"Sec. 2. That any person above the age of 21 years who is a citizen of the United States, or who has declared his intention to become such, or any association of persons severally qualified as above, corporate or otherwise, shall have the right to apply for a license to raise coal, oil, gas or other minerals mined for fuel, or asphalt, or any number of said minerals on areas not exceeding five governmental sections of land, and to use so much of the surface of said area as shall be determined by the Secretary of the Interior to be necessary to the proper conduct of the business: Provided, That no common carrier as defined in the act of February 4, 1887, entitled 'An act to regulate commerce and acts amendatory thereof,' and no association, any member of which is an officer, agent or shareholder, or in any manner interested in the business of any common carrier, shall be permitted to hold a license under the provisions of this act: And provided, That no person or association, corporate or otherwise, shall receive a license to more than one area, and no association, corporate or otherwise, any member of which is a licensee or is interested in any association, corporate or otherwise, which is a licensee, shall be permitted to hold a license under the provisions of this act."

Section 3 of the bill prescribes the method of making application for licenses as follows:—

"Sec. 3. That applications for licenses shall be made in duplicate in writing to the register of the land district in which the land proposed to be licensed is situated, or to some register or other officer to be designated by the Secretary of the Interior if the land is not situated within any land district, and shall contain a statement of the mineral or minerals proposed to be mined and the definite location and number of acres, together with a plot thereof and a statement upon oath, which, in case the applicant be a corporation, that the applicant or applicants are to exercise the license for their own benefit and for the benefit of none other, corporate or otherwise; that they are duly qualified under the provisions of this act, and a statement on oath of all the public lands of the United

States entered or owned or leased or held under license and of all Indian lands held under lease or license by the applicant, or any member of an association, corporate or otherwise, which is an applicant; and if the applicant be a corporation, a complete list of its officers and stockholders with their several places of residence, duly sworn to by the officer having charge of the corporate records, and a statement upon oath from each stockholder of such corporation and each member of such association that he is in no manner interested in the business of any common carrier, and sworn statements of such other facts necessary to the proper execution of this act as the Secretary of the Interior may require. Any person making a false statement under oath under the provisions of this section shall be deemed guilty of perjury under the laws of the United States."

An important feature of the measure describes the form of license to be issued by the Government and stipulates the rates of royalty or rentals as follows:—

"Sec. 5. That the license which shall be issued by direction of the Secretary of the Interior in the name of the United States shall be subscribed by the licensee or licensees, or, if the licensee be a corporation, by a duly authorised officer thereof, and shall contain the following:—

"First. An accurate description of the area by government subdivision or by bounds and monuments.

"Second. The term for which the license is to run, which shall not exceed a period of thirty years.

"Third. A covenant on the part of the licensee or licensees to pay a rent of not less than 10 cents per acre, to be paid annually in advance, the said rental charge to be fixed by the Secretary of the Interior, which rent shall be abated by the amount paid in royalties during the year for which said rental has been paid, providing that nothing herein contained shall be construed as limiting the amount which may be collected as proceeds of royalties hereinafter provided for.

"Fourth. A covenant to pay a royalty to the United States Government of not less than 8 cents per ton mine run on all coal or other mineral mined for fuel, and of not less than 60 cents per ton upon mineral mined for hard asphalt, and of not less than 15 cents per barrel of mineral mined for soft asphalt, and of not less than one-eighth of the value of the product of any oil well, and of not less than \$50 per annum for each gas well not utilised, and at a rate of not less than 1 cent per thousand cubic feet of gas when the product of such gas well is utilised. In determining the amount of royalty which shall be paid for the mining of coal, oil, gas or other minerals mined for fuel, or asphalt, the Secretary of the Interior, shall give consideration to transportation facilities, and to such other circumstances as affect the business.

"Fifth. Covenants providing for the proper and effectual working of the coal, oil, gas or other minerals mined for fuel, or asphalt: providing against waste of product due to methods of operation, insufficiency of or defects in

the works, or any other cause whatsoever, which may be within the control of the licensee or licensees; providing for the observance of all lawful rules and regulations and provisions of law relative to the safety of employees: providing for the proper protection of the surface of licensed areas, and providing for the surrender of said works upon the termination of the license."

Certain extraordinary provisions designed to compel licensees to comply with all the interstate commerce laws and to prevent common carriers from becoming interested in the development of oil, gas, asphalt and coal lands, are incorporated in Section 8, which provides as follows:—

"Sec. 8. That any license shall terminate by operation of law if the licensee or licensees conduct the business in a wasteful or extravagant manner, or if there be any violation by the licensee or licensees, their managers or agents, of the act of July 2, 1899, chapter 647, entitled 'An act to protect trade and commerce against unlawful restraints and monopolies,' or of the act of August 27, 1894, chapter 349, sections 73 to 77 inclusive, or of any acts additional or amendatory of either of said acts, or if any individual licensee or association, corporate or otherwise, or member thereof having a license under this act, shall acquire any interest in the business or shall be employed by, or in any manner come under the control of any common carrier: Provided, That if such interest be acquired by will or descent by law a reasonable time shall be allowed for the disposal of such interest: And provided further, That any member of an association, corporate or otherwise, to which a license has been issued who has acquired an interest other than by will or descent by law in the business of any common carrier shall forthwith dispose of such interest or dispose of his interest in the association or corporation to which a license has been issued, and in the event of his failure so to do the license shall terminate; and if two or more licensees shall combine in any manner whatever as to the ownership of licenses, operation of licensed areas, or as to the ownership or sale of any of the products thereof, each of said licensees shall be disqualified under this act, and the license of each shall terminate."

PRODUCTION OF ENGLISH COMPANIES IN RUSSIA.

LATEST DETAILS CONCERNING THE SPIES FOUNTAINS.

BAKU RUSSIAN PETROLEUM Co., LTD.—The production for the week ended March 14th was 210,000 poods, or 3,385 tons; and for the week ended March 21st was 195,000 poods, or 3,144 tons.

RUSSIAN PETROLEUM AND LIQUID FUEL Co., LTD.—The production for the week ended March 14th was 295,000 poods, or 4,772 tons; and for the week ended March 21st was 237,000 poods, or 3,821 tons.

SPIES PETROLEUM Co., LTD.—The output for the week ended March 15th was 350,860 poods, or 5,659 tons, of which the fountain in No. 5 well, plot Baskakoff, produced 211,235 poods, or 3,407 tons. The increase in the total production for the week was due to a small general increase all round. The fountain on Baskakoff continues to spout, the production for the 16th inst. being 28,115 poods, or 453 tons. The total production from this fountain to the 16th inst. was 1,039,480 poods, or 16,765 tons. On the night of the 15th March a small intermittent fountain was struck upon one of the company's old plots, plot Stupin, in No. 9 well, which gave, up to 3 o'clock p.m. on the 16th inst., 8,545 poods, or 137 tons. This fountain also continues to spout intermittently. No portion of the production from this latter fountain, however, is included in the week's production given above. The production for the week ended March 22nd was 359,125 poods, or 5,792 tons, of which the Baskakoff fountain gave 193,350 poods, or 3,118 tons; and the Stupin fountain gave 64,420 poods, or 1,039 tons. The total productions of the Baskakoff and Stupin fountains to the 23rd inst. were 1,232,225 and 73,345 poods respectively (19,874 tons and 1,183 tons), and both fountains continue.

THE EUROPEAN PETROLEUM Co., LTD.—The production for the week ended March 15th was 126,474 poods, or 2,039 tons; and for the week ended March 22nd was 125,928 poods, or 2,030 tons.

THE NEW TANKER "OBERON" AT THAMES HAVEN.



The new tanker "Oberon," recently built to the order of Messrs. C. T. Bowring and Co. by Messrs. Armstrong, Whitworth and Co., was in the Thames a few days ago discharging her first cargo at the Thames Haven tanks. She was chartered to the British Admiralty, and brought a cargo of Indian oil from Rangoon for use in Admiralty boats. The photograph here reproduced was taken by Mr. R. J. Eastabrook, of Thames Haven, for the REVIEW as the vessel drew alongside the jetty to discharge her first cargo.

The BAKU RUSSIAN PETROLEUM COMPANY, Ltd.

MEETING OF INFLUENTIAL SHAREHOLDERS.

On Tuesday afternoon of last week a meeting of holders of 1,000 shares and upwards in the Baku Russian Petroleum Co., Ltd., convened by the Shareholders' Committee, was held at the Cannon Street Hotel, there being a large number present.

Mr. W. Watson Rutherford, M.P., Chairman of the Shareholders' Committee who was voted to the chair, briefly reviewed the financial position of the company, stating that the company owed about £380,000, which it was totally unable to pay. About £100,000 of that consisted of debentures falling due on 31st July next, and the rest consisted to some extent of current bills in the bank in Russia and money owing on open account. The position which the board of directors had succeeded in getting the company into was that a receiver was now in possession with the authority of the court, appointed on behalf of the debenture holders, whose money was not yet due, and consented to by the directors, and as he understood it the position in Russia was that gentlemen equivalent to the English bailiffs were now in possession of the property. Under the circumstances, it was obvious that from the financial point of view at the present moment the position of the company was exceedingly unfortunate—it was very bad indeed. Well, what was the position with regard to the property? There were altogether 27 distinct pieces, the majority of which were interlaced with the most valuable and finest producing pieces of oil land in Baku, belonging to such important and successful concerns as Nobels and the Mazout Co. One part of the property was situated at Bebe-Aibat, four miles to the south of Baku, the other oil bearing properties being at Balakhany, nine or ten miles to the north of Baku. Thus the company's oil bearing properties were some 14 or 15 miles apart. In addition there were some 170 acres of entirely undeveloped estate, adjoining which an excellent supply of natural gas, discovered two or three years ago, was being worked at a handsome profit, and a most important fountain of oil had taken place. The Bebe-Aibat properties produced a large portion of the company's excellent production in 1901 and 1902, but he felt certain they had not been worked at a profit during the last three years. Last year the company made a profit of approximately £80,000 net with a reduced production, as compared with two or three years ago, and with a very much increased cost, thus shewing what the property was capable of doing if it were properly developed and efficiently managed. Having regard to the prices at which properties had lately changed hands he had come to the conclusion that outside the Bebe-Aibat properties the company had at least £850,000 or £900,000 worth of saleable excellent oil land second to none in Baku.

They had succeeded through some friends in London, in getting into communication with important financial groups in Russia, who, the committee were satisfied, were ready to enter into negotiations on a distinct basis. One of the bases would be this: they would be willing to purchase the Bebe-Aibat property from this company, he believed, at the sum of £350,000 on certain terms which would involve the company's getting a very large sum in cash down and the rest in reasonable instalments before they parted with the legal possession of the property. It was obvious that that would get their company practically out of all its difficul-

ties and leave them with all the rest of their valuable properties to the good. Another proposal was that some of these Russian gentlemen would be willing to take a lease of the whole concern at a very big rental—over £100,000 a year; they would be willing to find £200,000 of cash immediately for the company towards its debts; and they would want an option of purchase for a year or two at £1,000,000. It seemed to the committee that these proposals were of such an advantageous character in the present awful financial position of the company that it was absolutely essential that they should get the board of directors to stop all recrimination, all issuing of circulars and that kind of thing, and really try and see whether they could not work with the committee to carry this out. Finding the committee could not do any good with the board he went to see one of the largest shareholders himself—one who had hitherto been supposed, at all events, to be against the committee, and on the side of the board—and that gentleman, as soon as these propositions were put before him and he was shewn the authority the committee had for them, frankly said he thought the suggestion about the Bebe-Aibat sale was the most desirable thing to entertain and to carry out, if possible, and he communicated with the board. He (the chairman) had succeeded that morning in getting the board of directors to pass a resolution which he himself drew up as follows:—“That a joint committee be appointed to deal with the financial position of the company, two to be appointed by the board and two by the unofficial Shareholders' Committee, together with a fifth to be agreed upon.” The Shareholders' Committee had since met and had unanimously passed the same resolution in identical words, and it seemed to him that there was nothing to be done now except for this joint committee to proceed to carry this matter out. When these proposals were brought to fruition, which the committee believed they would be in the course of the next two or three weeks, those shareholders who had taken all this trouble, at their own expense to a very large extent and at their own loss of time, would certainly expect to have a very large say in the future management of this company. He did not disguise the fact that if they sold that Bebe-Aibat property they would certainly be selling a very valuable asset, but they would be parting with a portion of their property which at present was not doing well. He carefully examined it in September and formed the conclusion that it would take at least £80,000 to put it in a proper state. The company was not in a position, owing £380,000, to find £80,000 more to develop that particular piece; but if those Russian gentlemen were willing to come forward, knowing the value of that property, and give £350,000 for it, and then proceed to make it a paying property by finding £80,000 more for that purpose, it seemed to him that that was the course which should be adopted.

The speaker then proposed a resolution in similar terms to that already read. The chairman of the company and himself had mutually agreed to accept Sir John Ellerman as the fifth member of the joint committee for at all events temporary purposes, Sir John being the trustee for the debenture holders.

Mr. A. C. Holzapfel seconded the resolution, which was then put and carried *nem. con.*, a vote of thanks to the chairman and the committee closing the meeting.

DELIVERIES OF OILS FROM BAKU IN 1907.

The total quantities of various petroleum products dispatched from Baku to various destinations in 1907 amounted to 396,691,858 poods, against 325,755,477 poods in 1906, an increase of $21\frac{3}{4}$ per cent.

The deliveries, classified according to products in 1907, compared to 1906, were:—

	1907. Poods.	1906. Poods.
Illuminating oils	91,600,148	71,528,834
Lubricating oils	14,107,754	15,114,682
Residuals	250,505,031	204,278,693
Crude oil	35,739,863	33,331,587
Other products	4,739,062	1,501,711
Total	396,691,858	325,755,447

According to destination, the deliveries in 1907 were:—

By Rail—	1907.	1906.
To Batoum	39,224,180	34,952,533
Other towns on the Caucasus	15,026,529	16,899,857
By Baku Petrovsk line ..	6,128,679	2,538,516
By Sea—		
To Astrakhan	313,787,960	249,680,856
„ Petrovsk.. ..	6,340,922	5,353,725
„ Transcaspian Province..	8,601,330	9,041,370
„ Other Caspian ports ..	3,663,023	3,573,537
„ Persia	1,587,909	1,451,138
By Cart—	2,301,326	2,263,915
Total	396,691,858	325,755,447

The deliveries to Batoum in 1907 consisted of:—28,828,261 poods against 24,560,311 poods in 1906; lubricating oils, 7,952,830 poods (5,403,536 poods in 1906); residuals crude oil and other products, 2,443,080 poods against 988,666 poods in 1906.

The deliveries to Astrakhan in 1907 consisted of:—Illuminating oil, 58,350,985 poods against 43,523,204 poods in 1906; lubricating oils, 4,663,718 poods (against 442,204 poods); residuals, 237,458,851 poods (187,195,191 poods); crude oil, 18,901,027 poods (21,078,768 poods); other products, 1,854,896 poods (1,095,439 poods).

The deliveries to Petrovsk by rail and sea in 1907 amounted to 12,469,601 poods against 7,892,241 poods in 1906. These deliveries in 1907 consisted of:—Illuminating oil, 5,888,866 poods against 5,030,901 poods; lubricating oils, 1,144,860 poods (863,039 poods in 1906); residuals, 717,729 poods (1,627,868 poods); crude oil, 4,185,304 poods (127,380 poods); other products, 532,842 poods (243,841 poods).

No changes of any importance occurred in the deliveries of oils in other directions.

THE PETROLEUM TRADE OF NOVOROSSISK IN 1907.

The trade of the port of Novorossisk in petroleum products in 1907 is shewn below in the figures of the arrivals of oils from Baku and Grosny, and also of the shipments of same to Russian and foreign ports (in poods):—

I.—ARRIVALS AT NOVOROSSISK.

	From Baku.	From Grosny.	Total.	
			1907.	1906.
Illuminating oil	198,730	394,963	593,693	3,190,257
Crude oil ..	398,504	3,024,935	3,423,439	2,173,076
Residuals ..	25,963	—	25,963	613,668
Benzine ..	—	2,076,545	2,076,545	607,834
Ligroin ..	—	74,109	74,109	264,283
Total ..	623,197	5,570,552	6,193,749	6,849,118

II.—SHIPMENTS FROM NOVOROSSISK.

	To Russian Ports.	Abroad.	Total.	
			1907.	1906.
Illuminating oil	982,913	714,051	1,969,964	3,485,356
Crude oil ..	6,417	—	6,417	4,047
Residuals ..	1,887,105	—	1,887,105	2,655,178
Benzine ..	5,449	2,241,989	2,247,438	646,727
Ligroin ..	—	—	—	419,845
Goodron ..	1,211	—	1,211	3,230
Total ..	2,883,095	2,956,040	5,839,135	7,214,383

It will be observed that there has been a decrease in the total shipments from Novorossisk in 1907, due chiefly to the falling off in shipments of illuminating oil abroad, and of residuals to the home ports, which is only partly counterbalanced by the increased export of benzine.

It will further be observed that there are considerable discrepancies between the quantities of certain products delivered at Novorossisk from Baku and Grosny and the quantities of the same products shipped during the year. Thus, crude oil and also ligroin were delivered at Novorossisk in considerable quantities, but none were shipped. On the other hand, illuminating oil and benzine were shipped in quantities exceeding the deliveries from Baku and Grosny. The explanation is to be found in the fact of the existence at Novorossisk of a large refinery, where the crude oil and ligroin are treated and turned into products.

Change of Address.—Readers will kindly note that Messrs. Chittenden and Co., of 110, Fenchurch Street, E.C., have now removed their offices to 21, Great St. Helens, E.C., where all communications should be addressed. The London office of the Brunn-Konigsfelder Maschinen Fabrick has also been removed to Messrs. Chittenden and Co.'s new address.

CLASSIFIED IMPORTS INTO UNITED KINGDOM UP TO MARCH 23rd, 1908.

IN GALLONS.

[ALL RIGHTS RESERVED.]

COUNTRY.	ILLUMINATING.		LUBRICATING.		RESIDUALS.		GAS OIL. (Solar)		BENZINE.		FUEL OIL.		OTHER DESCRIPTIONS.		TOTALS.	
	Since Mar. 9.	From Jan. 1.	Since Mar. 9.	From Jan. 1.	Since Mar. 9.	From Jan. 1.	Since Mar. 9.	From Jan. 1.	Since Mar. 9.	From Jan. 1.	Since Mar. 9.	From Jan. 1.	Since Mar. 9.	From Jan. 1.	Since Mar. 9.	From Jan. 1.
Austria ...	—	—	—	16,000	4,000	17,180	—	—	—	—	—	—	—	—	4,000	33,180
Belgium ...	—	—	38,540	193,040	—	24,000	—	—	—	40	—	—	—	—	38,540	217,080
Canada ...	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Dutch India.	—	—	—	—	—	—	—	—	1,556,380	4,420,510	—	—	—	—	1,556,380	4,420,510
Germany ...	23,680	365,500	37,150	377,280	—	6,090	—	—	—	—	—	—	230	2,590	61,060	751,460
Holland ...	—	—	1,570	9,220	—	—	—	—	34,600	76,840	—	—	2,400	17,260	38,470	103,320
Roumania ...	—	2,325,900	—	—	—	—	—	3,083,150	—	966,080	—	—	—	—	—	6,375,130
Russia ...	610,870	4,297,930	5,460	773,460	—	—	—	—	—	—	—	—	—	—	616,330	5,071,309
U.S.A. ...	2,661,510	24,209,870	2,171,520	10,991,070	590,170	601,290	4,688,530	13,110,460	—	349,840	266,930	1,358,300	50,810	601,720	10,429,500	51,222,550
Other Countries	—	—	800	34,810	—	—	—	—	—	280	—	520	—	160	800	35,770
	3,296,060	31,199,200	2,255,040	12,394,880	594,170	648,560	4,688,530	16,193,610	1,590,980	5,813,590	266,930	1,358,800	53,470	621,730	12,745,180	68,230,390

NOTES FROM ALL QUARTERS.

RUSSIA.

Mr. E. H. Khais, engineer, has renounced his rights of petroleum exploitation on plot No. 140 at Berekei.

The Caspian Tank Fleet is actively preparing for the opening of navigation and all the engineering works at Baku are full of work in making and repairing machinery and fittings for the ships.

Land Transfer at Balakhany.—Mr. P. O. Goukassoff has sold his petroleum property called the Zabava plot situated on plot No. 8 at Balakhany to Mr. S. M. Schryro, a merchant at Baku. Government sanction for the transfer has already been obtained.

Governmental Land Rental.—The Russian Ministry of Commerce and Industry has by virtue of the powers vested in him by the mining law, fixed the amount of the rental payable for land given over for explorations for petroleum in the Kuban province on the Caucasus at 5 roubles per dessatine.

To Combat High Prices.—A great agitation is now in progress at Nijni-Novgorod, having as its object the calling of a conference of users of petroleum products from all over Russia, to devise means of combating the high prices of oils now prevailing. A deputation has been nominated to submit a memorandum on this subject to the Ministers of Commerce and Industry, Finance and Railways.

A New Refinery at Black City.—A new lubricating oil refinery is now in course of erection at Black City, Baku. The old Shagidanoff kerosene and lubricating oil refinery, lately rented by Mr. Dembot, has during the past few years been manufacturing kerosene only, and lubricating oil stills were lying idle. At present the lubricating oil stills are being rebuilt, and thus a large new source of supply of lubricating oils will be created.

AMERICA.

Captain Lucas on the Look-out.—Captain A. F. Lucas, whose name is so closely associated with the Spindle Top boom has lately been in Houma, La., where it is reported he is preparing to drill for oil.

Heavy Stocks.—Despite a substantial increase in the deliveries of oil from the Illinois field during February, the stocks at the close of the month were the heaviest on record, reaching over 15,000,000 barrels.

New Corporations.—Three of the most recent corporations to be formed in Texas are the Lucky Strike Oil Co., with a capital of \$10,000; the Hope Oil Co., with \$30,000 of stock; and the Halbert Oil Co., of Center with a stock of \$20,000.

A New Guffey Company Steamer.—The Guffey Co.'s latest tank steamer—the "Oklahoma"—has recently been launched at New York. The new tanker has a capacity for 60,000 barrels of oil, and is the largest American built vessel of its class.

Another Outlet for Californian Oil.—The outlets for Californian crude oil are increasing from month to month. It is now announced officially that the Government intends to equip the machine shops along the route of the Panama Canal with oil fuel from the State.

The Fullerton Field.—The Fullerton field of California is at present one of the most active in the State, the operators rushing field work with all activity. The Brea Canyon district has received quite a boom by the bringing in of a well owned by the Orange Oil Co., with a production of 400 barrels daily.

Jennings to the Front.—One of the largest gushers associated with the development of the Jennings field of Louisiana is reported as having been brought in upon a site several hundred feet from any other producer. During a test, the well flowed at the rate of 4,000 barrels of oil per day.

Texas Production Increasing.—The production of the Texas fields is on the increase, and at the end of last month was placed at about 35,000 barrels daily. In Saratoga, Batson, Humble, Sour Lake, and Spindle Top slight increases are to be noted, while activity in drilling is increasing. The daily average of the fields for February was about 33,000 barrels as against 31,000 barrels for January.

The Caddo Field.—At last something definite is known about this newest Louisiana field. The profitable formation is found at a depth of 2,260 feet, and the wells that have touched this depth are very productive. The field embraces about 10,000 acres, and in it, land values have advanced 40 per cent. during the past few weeks.

Railroad Company and Oil Production.—The Southern Railroad Co. are now very active in the development of their holdings in the Coalinga field, and it is probable that in the near future they will be producing a very large proportion of their oil fuel from their own wells. The recent low prices have prevented their turning the wells to good account earlier.

Important Californian Deal.—A deal of some considerable importance has recently been brought about in the Californian fields between the Palmer Oil Co. operating in the Santa Maria field and the San Juan Cement Co. of Santa Cruz. The contract calls for the delivery of 2,000,000 barrels of crude oil to be made within the next three years at a price of 50 cents per barrel.

New York Large Shipments.—During the first two months of this year, the largest customers for refined oil exported from New York was Flushing, which took over 18,000,000 gallons, while Rotterdam took nearly 14,000,000 gallons. For the same period last year these ports took 19,000,000 gallons and 7,600,000 gallons respectively. Shanghai which took 10,000,000 gallons for the first two months of 1907, has so far this year taken about one-eighth of that quantity.

ROUMANIA.

The Colombia Company is about to further increase its capital in order to develop on a large scale its crude oil producing and refining business. Mr. L. Elias, the managing director of the company, is now in Paris in connection with this question.

Encouraging.—The well which the Galo-Romano Co., are drilling in the locality of Filipesti di Targ-Ditesti, on the property of Mr. C. Mitilenu, has reached a depth of 180 metres. The formation of the strata is similar to that of Moreni, and there are indications that the well will strike prolific oil strata.

To Facilitate Export.—The Roumanian Senate has now under consideration the question of the construction by the State of a new railway from Campina to Constantza, which has been an urgent need for the further development of the petroleum industry. The proposed route is Campina-Ploesti-Nr. ziceni-Slobozia. The Prime Minister, M. Stourdza, pronounced a strong speech in favour of the railway.

To Exploit at Adunatzi-Petrari.—The executors of Mr. Paleologu, owners of a property at Adunatzi-Petrari in the Dambovitza district, and Mr. Virgile Tacit, who has a half-interest in the mining rights of that property, have granted a concession to Mr. Julius Winter, of Kamen, Westphalia, to exploit this property for petroleum and other minerals. Mr. Winter undertook to start three boreholes before the 1st July and 1st October, 1908, and 1st March, 1909, respectively. The price is 800 francs per hectare and a royalty of 8 per cent.

Roumanian Production for February.—The complete figures of the Roumanian production during February are not yet available, but judging by the production of the large firms the total will be about 100,000 tons. The production of the leading firms was:—Steaua Romana, 26,476 tons, against 27,312 tons in January; Regutal Roman Co., 17,297 tons (24,944 tons in January); Concordia Co., which took over the properties of the Bustenari and Telega Co.'s, 13,437 tons (12,893 tons in January); Romano-American Co., 9,175 tons (9,543 tons in January).

Increasing Production at Baicoi.—The property now held at Baicoi by Mr. Jean Ganz on behalf of a German syndicate, but which formerly belonged to the Roumanian United Petroleum Co., Ltd., during February increased its production to 176 tons. There are on this property six boreholes and six hand-dug wells. Of the boreholes two are producing from depths of 397 and 251 metres respectively, three are in drilling and one abandoned. The two productive boreholes yielded in February 90 tons of oil. Of the hand-dug wells two are productive which yielded in February 86 tons of oil.

LATEST QUOTATIONS OF PETROLEUM SHARES.

ENGLISH COMPANIES.

This list is restricted to companies who have paid dividends or who are producers.

Company.	Capital Paid Up.	Value of Shares.	Latest Prices.
Assam Oil	£205,000	£1	1/8-5/8
Baku Russian Petroleum ..	£750,000 Ord.	£1	1/6-2/6
..	£650,000 5 1/2% Pref.	£1	3/0-4/0
Bibi-Eybat Petroleum Co. ..			7/0-8/0
Californian Oilfields ..	£385,000 Ord.	£1	5 3/8-5 5/8
Commonwealth Oil Co. Pref	18/- paid up (Prem.)		8-1
..	Def.. £1 fully paid		1-1 1/4
European Petroleum ..	£550,000 Pref.	£1	1/0-2/0
..	£550,000 Ord.	£1	0/6-1/6
..	£376,000 Deb.	£100	70-74
Russian Pet. & Liquid Fuel ..	£500,000 6 1/2% Pref.	£1	2/6-3/6
..	£600,000 Ord.	£1	2/0-3/0
Schibaieff Petroleum ..	£575,000 6% Pref.	£5	1-1 1/4
..	£575,000 Ord.	£1	1/6-2/6
Shell Transport & Trading ..	£2,000,000	£1	43/6-44/6
..	£1,000,000 Pref.	£10	10 1/8-10 3/8
Spies Petroleum Company ..	£312,500	10s.	9/0-10/0

RUSSIAN COMPANIES.

Company	Nom. Value in Roubles.	Quotations on Mar. 23rd.	
		Lowest Roubles.	Highest Roubles.
Baku Naphtha Co.	100	515	518
Balakhany Naphtha Co. ..	250	—	—
Caspian Society	1,000	4,125	4,150
Mazout Co.	250	—	—
Melikoff, A. C.	250	—	—
Mirzoeff Bros.	250	—	—
Naftalan Co.	250	—	—
Naphtha Co. "Kavkas" ..	250	—	—
Naphtha Trading Co., A. I. Manta-			
cheff & Co.	250	160	162
Neft Co.	250	—	—
Nobel Bros.	5,000	11,300	11,400
..	250	—	—
Rops and Co. V... ..	250	—	—
Russian Naphtha Co. ..	250	—	—
Society Mazout	250	—	—
Ter-Akopoff Co.	250	—	—
Tumaieff & Co., J. G. ..	250	—	—
Volga-Caspian Naphtha and Trading Co	250	—	—
.. (Second Issue)	250	—	—

SCOTCH COMPANIES

Supplied by Messrs. MACLEAN AND HENDERSON, STIRLING.

Company.	Capital Paid Up.	Value of Share.	Latest Prices.
Broxburn Oil Co., Ltd., Ord. 17/- pd	£235,000	£1	£2 2s. 3d.
Do. 6% Cum. Pref. ..	£100,000	£10	£12 7s. 6d.
Burmah Oil, Ord.	£1,100,000	£1	£3 16s. 6d.
Do. Pref.	£250,000	£1	£1 6s. 6d.
Dalmeny Oil Co., Ord. (7 paid) ..	£37,800	£8 10s	£5 10s. od.
Do. 5% Pref.	£18,900	£7	£4 13s. od.
Oakbank Oil Co., Ltd., Ord.	£170,000	£1	£1 9s. 3d.
(17s. paid)			
Pumpherstons Min. Oil Co., Ltd., Ord.	£110,500	17s.	£12 10s. 9d.
(17s. paid)			
Do. 6% Cum. Pref.	£100,000	£10	£13 os. od.
Tarbrax Oil Co., Ltd. Ord. (£1 pd.)	£37,350	£1	£2 18s. od.
Do. 6% Cum. Pref.	£35,000	£1	£1 3s. od.
Young's Paraffin Co., Ltd., Ord. ...	£452,808	£4	£3 12s. 6d.
Do. "B" Deb...	£150,000	£100	£155 os. od.

DUTCH COMPANIES.

Company.	Latest Quotations (per cent.)	Florins
Arnhemsche Petroleum Mij.	30 3/8	1,000
Aurora .. (Deb. 5%)	8 1/8	—
Campina Poiana Mij.	—	—
Dordtsche Petroleum Mij. (Pref.) ..	13 1/2	50
.. (Deb. 4 1/2%)	10 1	1,000
Gaboës	2 1/8	—
Holl. Rumeensche Petroleum Mij. ..	13	1,000
Int. Rum. Pet. Mij.	36 1/16	500
Java Petroleum Mij. (Ord.)	—	1,000
.. (Pref.)	18	—
Koninklyke Nederl. Pet. Mij. Shares ..	28 1	250-1,000
.. Share certificates	27 1/4	1,000
Mœara Enim Petroleum Mij.	139 3/8	100
.. 1-1,000 Oblig. 5	—	250-1,000
"Moesi Ilir" Petroleum Mij.	—	—
Nederl.-Rumeensche Petroleum Mij. ..	3 1/2	—
Nieuwe Ned. Petroleum Mij. And. ..	—	1,000
Oliebronnen in Hannover Mij.	50	—
.. (Deb. 5%)	90	—
Panolan Maatschappij Cert.	28 2 1/2	—
Perlak Petrol. Mij. (6% cum. pr. A.) ..	136 1/8	1,000
.. (Common)	—	—
Sumatra-Palembang Petroleum Mij ..	92 1/4	500
Tarakan Petrol Mij.	38	—
Zuid Perlak Petrol. Mij. (Pref.)	85 3/4	—

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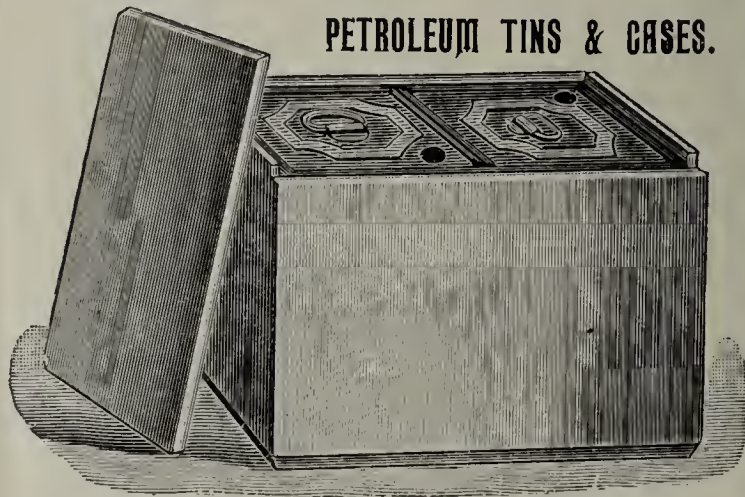
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(ESTABLISHED 1870.)

A. WILLIAMS and H. J. TALL, Joint Managers

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THE *rapprochement* which has lately been arrived at between the shareholders of the unfortunate Baku Russian Petroleum Co. and the directors, brings to an end the agitation which will be most assuredly placed upon history as the one step which has saved the company ignominious ruin. The drawing together of the directors and shareholders to unitedly work in putting forth one titanic effort to stay the hand of failure, and to

render the future secure, has been a long task, and the fact that it has not been brought about months, if not years, ago has been the greatest fault that can be laid at the doors of the directors themselves. From the first they have evinced a stubbornness which has been their guiding principle, and it has only been with the removal of many of the gentlemen who have formerly held the reins of office, that it has been possible to make anything like tangible progress in arriving at a settlement.

The fight has been long and difficult, and though the victory comes late in the day, 'tis better late than never, and this it is that to-day forms the one cause for congratulation. Even now what the outcome of the present changes may be, it is impossible to say; but from what we know, it is certain that the shareholders will benefit to a very great degree as a direct result of the agitation, for the disaster which was imminent has been averted, and the future has some degree of promise.

The agitation which has now accomplished its object, was, as our readers will well remember, commenced a little over two years ago when, being incensed with the miserable way in which matters in connection with the Anglo-Russian petroleum companies were being managed, and the fact that sooner or later the shareholders in the various concerns would discover that the whole of their at one time substantial investments had dwindled away, Dr. Dvorkovitz directed his attention to the Baku Russian Petroleum Co. Here, things were going from bad to worse; dividends were not forthcoming and the chances of securing them were becoming more remote each year. The company had been floated in trickery, and the promoters, dissatisfied even with incredibly large sums of £ s. d. taken from the pockets of the unwary investors, were doing all in their power to bleed the concern of its last few coffers. It was, indeed, time for speedy action, and had that not been taken at the time it was, it is almost a certainty that to-day the company would have lived in name only. Dr. Dvorkovitz saw what was inevitable, and so in December, 1905, he was instrumental in calling an extraordinary meeting of the shareholders to investigate the circumstances attending the formation of the company, and the subsequent carrying on of its business. It is now an old story, but more than one director of the company attended that memorable meeting with a pricked conscience. The promoters were in power upon the board, and the stubborn stand which they made against the appointment of an independent committee, may be likened to the drowning sailor clutching the floating straw. To a certain extent they were successful in their stand, for the committee which was chosen was a "picked and packed" one, being nominated by the directors themselves.

Charged with such a duty as that of investigating the conduct of those who had nominated them, one can easily imagine that the outcome of all this show would amount to nothing. And so it was. The gentlemen against whom Dr. Dvorkovitz had objected at a previous meeting, were each given the important positions upon the sub-committee which had charge of the "investigation," and when their report was issued, and what is

more, adopted by the shareholders, it stood as an undying example of how a body of shareholders can be hoodwinked by an astute directorate and their nominees.

But, after all, the report which this Investigation Committee presented was of some value, for it not only substantiated the many various accusations made against the promoters, but made a special point of the management of the business both in Baku and London, while emphasis was laid upon the undeniable fact that the company possessed very valuable oil territory.

In the face of such statements, it was clear that added strength was given to those who conducted the agitation, and this was further increased when, in March 1906, Sir A. C. C. de Renzy, Dr. Whitty, and Dr. Dvorkovitz sent out their pointed reply to the report of the committee. The provinces were roused to a pitch of enthusiasm, and meetings were held both in Manchester and Liverpool, at which many prominent shareholders strongly protested against the concern being conducted upon the unbusinesslike and unprofitable lines of the past. But beneath all this energy on the part of the gentlemen above mentioned, a way was being opened up which would bring the concern out of the mire, and eventually Dr. Whitty was able to announce that an eminently favourable proposal had been made to the agitation which would place the company upon a commercial and dividend-paying basis.

It is not for us here to weary our readers by going into the details of that scheme, but we may be pardoned for saying that had it been accepted, the shareholders would to-day have been regularly receiving dividends. But there were difficulties in the way. The parties in Russia—gentlemen of practical experience and backbone—desired to take over the properties and not the men who in London had charge of them, and so it was evident that had the scheme been carried through, the company's directors would have been no longer in power. To the discredit of the whole board, let us here say that the scheme received little, if any, consideration, and the offer which called for the cash payment of over £300,000, and of which sum a part was at that time in one of the London banks, was knocked on the head almost as soon as it was made.

But those who had engineered the agitation did not take their defeat lying down. Interest in the agitation grew as the company's position became worse, and in April, 1906—just a month or two after the splendid offer to work the properties had been refused—an extraordinary meeting was called by the agitation for the purpose of removing the existing directors, inasmuch as they had lost the confidence of the shareholders. Had the directors displayed as much shrewdness in managing the company's affairs as they did in trying to maintain their own positions on the board, the company would never have got into the ignominious position in which it is to-day. By their own efforts, and by voting for themselves, the resolution of no-confidence was defeated, and for a time they experienced a return of security, though only on half fees, while as a sop to the hungry shareholders, they appointed two gentlemen upon the board who had taken a part in the agitation in the provinces. This, so far as

it went was all very well, but it did not go far enough, and in the well-known words of one writer, "What is two amongst so many?"

But by this time the company was admittedly on its last legs. It owed freely and substantially, and its coffers were drained to almost the last penny. Truly, the situation was uncommonly dark. At Baku, matters improved, and the industry took a decided step forward, but this did not apply to the Baku Russian Petroleum Co. One satisfactory thing, however, was that the shareholders had learned by experience that it was dangerous to sit idly by and await events, and consequently in new quarters the agitation was renewed. On the other hand, the directors, threatened at last, as it were, by intelligence, saw how absolutely untenable their position was, and so one by one they resigned, leaving behind them the remains of a directorate which found it impossible to kick against the pricks.

It is now common knowledge that the making of a new offer, possibly only slightly less advantageous than the one made at the beginning of 1906, has brought about a joining of forces, and to-day we are within measureable distance of seeing an honest attempt being made to turn into profitable account—for the long-suffering shareholders—the valuable oil properties of the company. This, therefore, is not the moment, to arouse any hostility on the part of anyone. The past should be forgotten—if that be possible—and though this most promising turn of events might have been brought about long ago had not the directors been so obstinate, 'tis well to remember that it is "Better late than never."

PETROLEUM IN ARGENTINA.

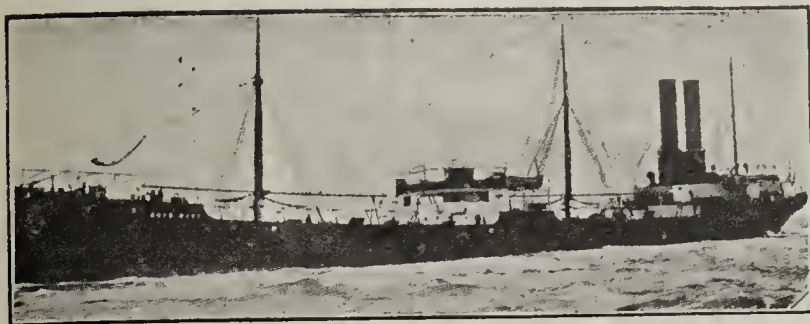
H.M. Consul at Buenos Ayres (Mr. A. Carnegie Ross) reports that he has obtained a sample of petroleum from the well at Comodoro Rivadavia (Argentine Republic), and has forwarded two bottles of the same which can now be inspected at the offices of the Commercial Intelligence Branch of the Board of Trade, 73, Basinghall Street, London, E.C. He is informed by the Chief of the Mining Department of the Argentine Government that a complete analysis of the oil has not yet been made, but that it has been ascertained that it contains some 55 per cent. of petroleum and a considerable portion of benzine, and that it is expected to be a good fuel. Experiments to ascertain this are being made on a couple of locomotives of one of the Government railways. The well is one kilometre (about half a mile) from the sea shore and three kilometres (about $1\frac{3}{4}$ miles) from the port, and at present it is yielding some 10 tons of oil per day. Another bore is being put down and new boring machinery has been ordered from Europe. Two hundred barrels of oil are said to be now lying at Comodoro Rivadavia ready for shipment. Comodoro Rivadavia is an open roadstead and the weather is often so bad that working cargo becomes impossible. There is deep water near inshore, and it would not be difficult to construct a pier and make a fair harbour. There is an ample supply of fresh water near the port. It has not yet been decided in what way the oil is to be worked, whether directly by the Government or under contracts following on public tenders.

The Consul adds that petroleum has also been found in Neuquen, and prospecting by private enterprise is now being carried on.

THE NEW TANKER "BUYO MARU."

The new oil tanker the "Buyo Maru"—to which we referred in our last issue—is herewith illustrated. A few words of her dimensions will be of interest to our readers.

Her leading dimensions are 398 feet by 50 feet 6 inches, and she carries a total deadweight of 7,100 tons on a moderate draught. She is built upon Swan's system for the carriage of liquid cargoes, whereby the variation in volume due to temperature change is absorbed within a specially proportioned expansion tank, which is so designed as to allow of a wide range of deadweight and



trim. She will be propelled by triple-expansion engines, having cylinders 26 inches, 43 inches, and 72 inches by 48 inches, with four steel boilers working at 180 lbs. Her machinery has been supplied by the North-Eastern Marine Engineering Co., Ltd. A large installation of pumping appliances is provided. She is fitted for burning liquid fuel, and bunkers are specially arranged for this fuel. Throughout her construction she has been inspected by Messrs. Atkinson and Young, of Liverpool, and also by Mr. Farnsworth, on behalf of her present owners.

The "Buyo Maru" is the fifth tank steamer built to Messrs. Moss and Co.'s order by the Elswick Co.

REVENUE FROM THE BURMAH OIL INDUSTRY.

Increased revenue from petroleum seems to be the outstanding feature of the report on the Land Revenue Administration of Burmah in 1905-07. The increased activity in the oil fields, due to the competition of the Rangoon Oil Co., and Messrs. Jamal Brothers with the Burmah Oil Co., was responsible for an increase in the total receipts classed as miscellaneous land revenue of nearly one and a-quarter lakhs, bringing the total to close on 25 lakhs. In 1900-01 the miscellaneous land revenue was only eleven odd lakhs and the difference between that figure and the amount realised in 1906-07 is almost entirely due to the increased output of oil. Considering, that nearly all other heads of revenue shew a decrease, it will be seen what an inestimable boon the development of the oil fields has been to Burmah.

TRAVELLERS WANTED.

EXPERIENCED TRAVELLERS Wanted, by an old-established firm of Oil Merchants. Midlands and South Wales. Address with and for full particulars to "C.P." c/o Streets, 30, Cornhill, London.

THE PETROLEUM INDUSTRY OF HANOVER DURING 1907.

During 1907 the Hanover petroleum industry achieved a notable increase in production. The total production of crude oil amounted to 81,000 tons, which establishes a record for the fields. The preceding years of 1905 and 1906 each shewed a decrease against their predecessors, as will be seen from the following figures of the production of the last four years:—

		Tons.			Tons.
1904	..	66,195	1906	..	57,788
1905	..	56,078	1907	..	81,000

There need be no fear of any over-production, as the demand for crude oil on the German market is still far from satisfied, and the German refineries have to get a considerable part of their supplies from abroad. The increased activity of the crude oil market is due to the appearance on the scene of the Vacuum Oil Co., which has bought large quantities of crude oil from the Wietze field for its refinery on the Elbe. The first result of the increased demand was a corresponding advance in price, and this improvement amounted to between 20 and 25 marks per ton. The increased production, however, failed to have any effect on the price, and there is an apparent tendency on the part of the refiners to enter into long contracts with the producers for the purchase of crude oil. The only local refinery at Wietze, which continues working, is the one of the Celle-Wietze Co., and the results of its operations in 1907 were not quite satisfactory. The explanation given in the annual report of the company, just published, is that it became necessary during the year to make extensive alterations in the plant, which prevented the regular working of the refinery. The efforts to bring about a further consolidation of interests in the Hanover petroleum industry have made but little further progress during 1907. There is every indication that a period of considerable development has now begun for the Hanover fields, due to the continued depression in the potash salt industry, which formerly took up all the energies and means of the boring firms, who now have to look for employment in the petroleum industry. The prices for boring work have lately gone down very considerably, as the supply is much in excess of the demand. This fact has again aroused interest in the Hanover petroleum fields, as is shewn by the creation of a new company called the Petroleumwerke Dannhorst, with a capital of 600,000 marks, to develop a petroliferous tract in the State-owned forest near Uchte. Hitherto, it was only known that one well struck oil in that locality, but the new company intends to carry out more extensive development work there, which are said to have been already taken in hand.

In Steinfoerde also fresh strikes of oil have been obtained lately, resulting in an increased production. If nothing untoward happens, it may be confidently expected that the current year will shew a further increase in the production of crude oil at the Hanover oil fields, which will be warmly welcomed by the German refineries, as they are anxious to make themselves as far as possible independent of foreign crude oil supplies. No fall in prices need be feared, as for a long time to come an over-production is out of the question. The value of last year's production may be estimated at least at 5,000,000 marks.

GROSNY PRODUCTION DURING JANUARY.

The production of crude oil at the Grosny oil fields in January, 1908, amounted to 3,595,763 poods, against 3,230,482 poods produced in December. Spouters in January yielded 460,130 poods, the largest part of which, namely, 403,400 poods, was obtained from the Akhverdoff plot No. 22, and the remaining 51,000 poods from plot No. 7 of the executors of Maximoff. In December the total production of spouters was 215,000 poods.

The production of the principal firms in January compared to December was as follows:—

	January, 1908. Poods.	December, 1907. Poods.
Akhverdoff	1,748,700	1,463,900
Spies Petroleum Co., Ltd. ..	593,405	586,445
Anglo-Russian Maximoff Co., Ltd.	427,000	418,700
Kasbeck Syndicate, Ltd. ..	171,600	176,400
Maximoff, Executors of ..	171,600	176,400
Russian Standard	94,785	105,870
Tcheleken-Daghestan Co. ..	86,600	97,440
North Caucasian Oilfields, Ltd.	83,700	92,850

The quantity of crude oil used as fuel at the wells in January was 719,138 poods. The stock at the end of January was 1,412,074 poods.

THE OPERATIONS OF THE ROUMANIAN REFINERIES IN JANUARY, 1908.

In January the Roumanian refineries have treated altogether 86,891 tons of crude oil. The output of various products was as under:—

	Tons.
Benzine	14,875
Illuminating oil	23,313
Lubricating oils	8,239
Residuals	39,536
	85,963

The quantities of various oils delivered from the refineries for home consumption in January were:—

	Tons.
Benzine	75
Illuminating oil	4,207
Lubricating oils	482
Residuals	32,799
Total	37,563

The output of paraffin scale in January amounted to 153½ tons.

MERSEY DOCKS AND HARBOUR BOARD.

BYE-LAWS FOR THE REGULATION OF PETROLEUM AND PETROL MOTOR VESSELS.

THE MERSEY DOCKS AND HARBOUR BOARD hereby give Notice that, in exercise of the powers conferred upon them by the "Mersey Dock Acts Consolidation Act, 1858," they have adopted a code of Bye-Laws for the Regulation of Petroleum and Petrol Motor Vessels, and the said Board also give notice that it is their intention at the expiration of fourteen days from the date hereof, to apply to the Board of Trade to approve of and confirm the said Bye-Laws.

The proposed Bye-Laws may be inspected on application to the General Manager and Secretary, Dock Office, Liverpool.

Persons objecting to the said Bye-Laws, or any of them, are required to forward their objections in writing, to the undersigned, at the Dock Office, Liverpool, and to the Harbour Department of the Board of Trade within fourteen days from the date hereof.

Dated this sixteenth day of March, 1908.

By order of the board, MILES, KIRK BURTON,
General Manager and Secretary.

Dock Office, Liverpool.

PETROLEUM PROSPECTS . .. IN SOUTH AFRICA.

By MR. M. J. STEPHAN,

Consulting Geologist, London.

Since the discovery of the Transvaal goldfields, which brought South Africa so much into prominence, petroleum indications have been reported—from time to time—to exist in different parts of the continent. No serious attempt, however, has ever been made until recently to investigate the qualities and value of these indications. Some shallow boreholes were sunk at different places, but the work was either commenced with insufficient means and without proper technical advice, or, still worse, as a means to create a gamble on the Stock Exchange. These failures naturally prejudiced the minds of many people interested in the development of the mineral resources of South Africa. Therefore, on starting my researches in 1902, I found it very difficult to convince people of the value of the indications. In the course of my researches, extending over four years, I have visited hundreds of places in South Africa, many hundreds of miles distant from each other, and the data I obtained furnished me with conclusive proofs of the commercial possibilities of the oil indications in some parts of South Africa. Below I shall give a short summary of the results of my investigations.

The indications of petroleum occur in two distinct zones which can be best classified into a coastal and an interior zone. Highly bituminous shales and lignite are found near the coast between Caledon and Port Elizabeth in the Cape Colony. The rocks rise steeply out of the sea in dunes up to 600 feet, consisting of marine shells, slowly rising to the mountain ranges covered with the rocks of the Bokkeveldt and Table mountain series, corresponding with the Devonian period. The strata has been subjected to great folding and faulting, and many signs of circular depressions can be found, sometimes filled with large deposits of salt after the rainy season. At Knysna and Port Elizabeth the largest deposits of bitumen have been found in some of these depressions. They have probably been formed by the decomposition of large deposits of organic matter, which was buried beneath the rocks at the time the depressions were caused by the breaking down of the strata. Exploitation work has been started near Port Elizabeth, and the result of the superficial work has been very encouraging.

No further indications of bituminous deposits have been discovered in this strata along the coast to the north, but most remarkable deposits have been found near Laurenço Marques and Inhambane in Portuguese territory. The country between Laurenço Marques and the Zambesi consists for the most part of alluvial deposits and sand-dunes, with a few isolated outcrops of rocks. From the study of these outcrops, the rocks near Inhambane, and the island of Inuac, near Laurenço Marques, I have come to the conclusion that the

siliceous sand, which covers the country to a large extent, is probably of pliocene age, and the underlying marl and limestones, the latter mainly consisting of nummulites, of miocene and eocene age respectively. These comparatively young deposits form flat or undulating areas, containing many lagoons and lakes charged with salt water. An elastic bitumen is found at some of these lagoons; the most important is that at Nhangella, 60 miles south of Inhambane.

This bituminous deposit is very similar to the coorongite of Australia. Many hundreds of tons have been deposited near the shores of the lake, containing as much as 100 gallons of petroleum to the ton, and they clearly shew that they were formed at different times. As an oily scum has been observed floating on the surface of the lake, and as in the rainy season this lake overflows a large part of the surrounding flat country, it is obvious that the source of the oil is beneath the lake, which, when overflowing, allows the oil to mix with the sand, forming the elastic bitumen. I consider the underlying highly-fossilised limestone to be the oil producer, and although work on an extensive scale was commenced in 1906, it has not met with any satisfactory result, owing to the ignorance and unscientific way in which the work has been carried out.

The above two regions are so far the only ones, where petroleum indications have been discovered in the coastal zone, and although future prospecting work may increase the places on which favourable indications are in existence, they are at the present time only of secondary importance as compared with the indications in the interior zone of South Africa.

THE INTERIOR ZONE.—The interior of South Africa is covered to a large extent by the Karoo formation, consisting of alternate beds of sandstones and shales with sheets of igneous rocks and traversed by many igneous intrusions. It is divided into three distinct deposits: the Eccle shale beds, Beaufort beds, and Stormberg beds, the first-named being the lowest, resting on the Dwyka conglomerates—the glacial period of South Africa. The Karoo forms a veritable tableland, ascending from west to east and ranging from 3,000 to 7,000 feet in height, suddenly dropping in the direction of Natal. Its eastern boundary, which probably extended much further east at the time of the fracture severing this continent, took place, is to-day marked throughout its whole length for several hundred miles, except a few isolated places, by the Drakensbergen, the highest elevation of the Karoo. Numerous indications of petroleum are found in these Karoo beds, almost down to the glacial formation, and they increase in number and value the nearer they occur to the Drakensbergen.

In the western part of Cape Colony and the Orange

River Colony, *i.e.*, west from the railway, Cape Town, Bloemfontein, Johannesburg, many isolated indications are found in the Eccca shale beds. They consist mainly of oil scum floating in pools of stagnant waters and of patches of bituminous rocks. In Caledon district, where mud volcanos exist, an oily fluid oozes out from fine-grained sandstone layers and the crevices of diabase intrusions. On the Commonage of Bloemfontein, petroleum was discovered at a depth of 80 feet, being of amber colour and representing a lighter hydrocarbon, having undergone a natural process of distillation. Most of these isolated indications occur close to igneous intrusions, locally called dykes. They may have originated from the heat acting on organic matters contained in the rocks, through which the dyke passed. On the other hand, they may have arisen from a deeper seated deposit of petroleum through the loosened strata.

In the eastern Transvaal, between Ermelo and Wakkerstroom district and Swaziland, highly bituminous shales are found in the Eccca beds, especially on both sides of the Slangapies mountains, near the Pongola and Mabola rivers. The outcrops can be traced for many miles, but the thickness of the deposits has not been proved yet. The shales are dark or bluish grey in colour with laminated fracture, but, as usual, differ very much in quality. They are found at the base of deep valleys cropping out on one or two sides, and, as layers of these shales can be found in intervals high up the slopes of the surrounding hills, they may probably also be found to exist in different layers in deeper horizons, although it is not easy to predict the depth owing to the peculiar nature of the shale strata.

For many miles near the Slangapies mountains and in a line parallel to the Drakensbergen, almost every stagnant pool in the river beds is covered by a thick oil scum, and I observed at a few places oil issuing from the crevices of sandstones on the sides of the rivers. One place in this neighbourhood is of particular interest for its outcrops of asphaltum in a narrow valley and in a highly disturbed strata. Development work was started at that place in 1903, but it was carried out in a most foolish way by sinking a large shaft to a depth of about 80 feet, consequently, a large portion of the money available had to be spent in keeping the shaft clear of water. I think that boring operations at some place in that valley should have given satisfactory results.

The oil indications in the Beaufort and Stormberg beds of the Karoo formation are mostly found in the eastern Orange River Colony. The Heilbron, Lindley and Senekal districts are especially noticeable. The indications occur in the Beaufort beds and are very similar to those in the Eccca beds, but far more numerous and closer to each other. They usually occur near or in the crevices of Dolerite dykes. Some of these dykes are full of maltha oil, especially on the farms Oilyfontein and Vlakfontein, in Lindley district. The close proximity of the above farms, the identical rocks and manner of occurrence, as well as many other indications of minor importance on and in the neighbourhood of these farms, indicate the presence of a mutual source of oil in a deeper horizon from which these indications originate.

Proceeding further east, the Karoo tableland, near the contact of the Beaufort and Stormberg beds, is distinguished by many small depressions called pans. On the shores of these pans, in the northern Bethlehem district remarkable evidence can still be found of an oil-containing strata beneath, by small pieces of earth saturated with petroleum, which must have been formed by the oil floating on the waves of the water with which these pans were formerly filled. This can be proved by the deposit not being found above high-water mark, and also by its presence only on that side of the shore which lies opposite the main direction of the wind. In former years this process was going on uninterruptedly, and the Boer farmers used these extensive deposits largely as fire material, as neither coal nor wood exists in that part of the Orange River Colony.

The most prominent oil indications occur near the western slope of the Drakensbergen. They run parallel with the trend of the mountains which is especially noticeable in the Ficksburg and Ladybrand districts. The rocks belong to the Stormberg beds traversed by many igneous intrusions. The oil is found in Dolerite dykes, sandstones and bituminous shales, and the Harrismith district is especially distinguished by very favourable indications. On and near the townlands of Harrismith I discovered more than a dozen prominent layers containing oil. Many boreholes put down to a depth ranging from 80 to 350 feet, for finding water on the townlands and along the railway line to Bethlehem, as also on three adjoining farms, yielded petroleum in large quantities. The main source of this oil is a decomposed bluish shale highly charged with petroleum and extending over a large area: at other places layers of fine grained sandstones, traversed by numerous small veins of limestone, contained oil and in two places I noticed an oily tar discharged into the Wilge River from a large deposit of these rocks. As far as 15 miles east of Harrismith similar indications of oil-containing sandstones and dykes are found. It is clear that we have to deal at this particular region with an oiliferous zone of some magnitude, which is proved by the large distribution of oil-containing strata, occurring in different rocks and at different height in a comparatively small area.

I have come to the conclusion that the petroleum in the Eastern Orange River Colony will be principally found as a primary deposit near the contacts of the different Karoo beds. It has, in my opinion, originated on the shores of former big inland lakes which once covered the whole of South Africa. The great tectonical movements in other parts of the world resulted in the interior of South Africa apparently only in great subsidences and collapses in the middle of the tableland, traces of which can be found everywhere. These subsidences occurred sometimes along peripheral lines and when the broken down masses finally settled, they probably caused the division of large lakes into several smaller ones with dry and elevated land between each of them. This would account for the way in which oil indications occur at many places in the Orange River Colony. The main point, however, is: that these indications represent an oiliferous stratum or strata in a deeper horizon.

Several syndicates have been lately at work in Bloemfontein, Ficksburg and Heilbron district, but their operations have been suspended owing to insufficient working capital. Although no extraordinary difficulties will be met with in sinking boreholes, a sufficient large amount of capital should always be provided for thoroughly prospecting the country, before deciding the site of a borehole. No great folding has apparently disturbed the horizontally deposited strata and such anticlinal structure, which may be found, will be limited by former local disturbances, and have to a large extent caused the breaking of this continuous tableland into many parts. Geological survey work has so far only been carried out by myself in the Harrismith district. A powerful syndicate is about to start work on the townlands of Harrismith under a well known expert of great experience, and I am sure that his work will be successful.

The following are the figures for the imports of oil into the four principal colonies of South Africa for the year 1905-06.

		Quantity. Gallons	Value. £
Engine and Machine oil	..	1,944,385	95,554
Paraffin	..	11,843,563	282,825
Other mineral oil	..	790,828	24,759
Total	..	14,578,876	£403,138

The above figures shew that, apart from all by-products, a South African oil producing company would have had a good market for its products in its own country, even two years ago. With the further development of the colonies and especially its vast mineral resources, the demand for petroleum, etc., will rapidly increase and, if ultimately large oil fields should be opened up, South Africa could by its geographical position easily hold her own in the competition for the world's supply.

NOBEL BROS. AND THE RUSSIAN HOME MARKET.

Some time ago a letter appeared in the *Trade and Industry Gazette* with reference to the announced policy of Messrs. Nobel Bros. to reduce the quantities of oil which they are shipping to the home market, accusing the firm of endeavouring to artificially restrict the supply of oil on the market by buying up and keeping in stock large quantities of crude oil. The writer declared that shipments during the coming navigation would be reduced notwithstanding that the production did not shew any decrease against the preceding year, but only because in August, 1907, Messrs. Nobel and Rothschild bought up the whole of the future production of Baku, and are hiding this oil in their own storage reservoirs and depôts so that neither the market nor the bureau of petroleum producers can know the extent of these stocks.

These allegations have now brought forth a protest in the form of a formal letter from Messrs. Nobel Bros.' head office at St. Petersburg wherein they declare that in August, 1907, the company made no purchases of crude oil but only accepted delivery of 3,800,000 poods of crude under old contracts. At Beyuk-Shor the company has 12 earthen reservoirs holding each 4,000,000 poods. Very little oil is stored there and the quantity of the

crude oil stored in those reservoirs is reported to the Council of the Petroleum Association which keeps a very accurate account of the turnover of all petroleum oils at Baku and publishes statements regularly. On the 1st February (o.s.) the stocks at Baku were:—Crude oil, 20,000,000 poods; residuals, 39,200,000 poods; kerosene, 7,000,000 poods. Nobel stocks on the same date were:—Crude, 13,700,000 poods; kerosene, 1,800,000 poods; residuals, 13,100,000 poods. Of the 13,700,000 poods of crude oil owned by the company only 5,400,000 poods are stored at Beyuk-Shor.

After refuting the allegations made against the firm they proceed to give an explanation of their policy by the following table of the production of crude oil and the way it was disposed of (in million poods):—

	1903-4	1904-5	1905-6	1906-7
Consumed at Baku	145	101	82	108
Consumed in other parts of Russia	403	378	329	304
Exported abroad	104	61	30	38
Total quantity marketed	652	540	441	450
Production of crude oil	627	450	404	484

It will be seen from the above figures that in the year ended November, 1904, the quantity of crude oil consumed and marketed exceeded the production by 25,000,000 poods, which came out of stocks at Baku and on the Volga; in the following year 90,000,000 poods had to be provided out of stocks; in 1905-6 stocks were again drawn upon to the extent of 37,000,000 poods, and only in the last trading year there was a surplus of production over consumption of 34,000,000 poods which went to replenish the exhausted stocks. Thus after several years, in 1907, an equilibrium was at last established between supply and demand for petroleum products; and the price of liquid fuel, the staple product, at once began to decline and is likely to continue on the downward grade.

On the other hand, at Baku prices are quite out of harmony with prices in the interior, and firms who will have realise their goods in the autumn will have to do so at a loss.

Thus the real reason for the curtailment of shipments by Messrs Nobel, is not, as was alleged, a desire to keep up high prices, but on the contrary by abstaining from buying at Baku, bring prices down to a reasonable level, more in accord with prices on the markets of the interior. It is, of course, clear that no distributing company, can lay in stocks of oil at the inflated prices now ruling at Baku.

It has now been officially arranged that the annual race meeting of the Auto Cycle Union will take place at the new Stadium, at Shepherds Bush on August 22nd.

NOTWITHSTANDING a steady rise in rubber, the latest price list of Dunlop tyres issued a few days ago gives details of very substantial reductions that have now been made both in covers and tubes of all the various sizes and sections manufactured by the Dunlop Pneumatic Tyre Co., Ltd., of 14, Regent Street, S.W. A postcard to the above address will bring the list per return.

STILL further inducements are offered to aeroplanists in Paris. A subscription has been commenced to raise a considerable sum to the aeroplanist who soars the highest.

DURING 1907 the Australian Commonwealth levied over £32,000 as duty upon the 760 cars which were imported into that country. It is stated that about 400 of the vehicles came from this country.

FEBRUARY IN THE AMERICAN OIL FIELDS.

The operations in the American fields during February shew a considerable falling off for the shortest month of the year not only in wells completed but in the new production. Even as compared with the results for the corresponding period a year ago, there is a general decrease. For instance, during last month an average of 30 wells a day have been completed as against 36 for each day during February, 1907. Prior to last month, however, the average daily completions were considerably greater, being 40 in January and 48 in December, while in October and November of last year the completions averaged 68 and 64 wells for each working day. Though completions for the last month were comparatively few, the number of dry holes drilled was far below the percentage for the previous month. After all, however, the percentage of dry holes was a little over 25, which, in proven areas is a very high percentage. The average yield of the February completed wells is more than those which were brought in during the preceding month, and this, too, is a matter for gratification. The average was over 13 barrels per well, whereas in January it was only 12.

During the month the Pennsylvania oil regions shewed a decline of 342 barrels in new production, the Lima-Indiana fields of 842, Kentucky of five and those of Illinois 2,815 barrels. At the same time the Mid-Continent regions made a gain of 895 barrels. This increase was credited to some good strikes in the Glenn pool and the Osage reservation.

The month's report of the great oil producing States, as published in our contemporary, the *Oil City Derrick*, records 753 wells completed, including 189 dry holes and gassers and a new production of 24,539 barrels. This represented a general decline of 303 wells completed, 3,109 barrels new production and 96 wells that were non-productive of oil in paying quantities. On the last of February there were 402 rigs and 848 wells drilling under way, which was a decline of four rigs and 54 wells drilling from the figures for January 31st.

THE CANADIAN OIL COMPANY OF PETROLIA.

A decrease of \$50,000 in the earnings of the Canadian Oil Co., at Petrolia, and the failure to float an additional half million capital last year, caused a clash of interests at the annual meeting of the company, at Toronto, a fortnight ago.

The forces in opposition to the president, W. S. Calvert, M.P., made the failure of the company to pay the usual dividend at 7 per cent. the basis of attack, but they were not there in sufficient numbers or with proxies enough, to obtain control of the company when the election of officers came on. The business depression and consequent decrease in profits was advanced, says the special correspondent of the *Oil, Paint and Drug Reporter*, as an argument for greater economy in the management of the business, and it was finally decided to cut off a number of the branch offices, retaining only the branches in the large centres through the Dominion. The Canadian Oil Co. was formed four years ago by an amalgamation of several oil concerns. At that time there was a bonded indebtedness of \$900,000 and this has been reduced each year by \$100,000, a very good showing, the president claimed. After a discussion on a proposal to grant the president an honorarium of \$800, a motion was adopted that no such payments be made until the company is in a position to resume the payment of dividends.

ADDITION TO THE BOARD OF THE COMMONWEALTH OIL CORPORATION.

Our readers will be interested in hearing that Mr. Walter Chamberlain, J.P. (brother of the Rt. Hon. Joseph Chamberlain) has joined the board of the Commonwealth Oil Corporation, Ltd.

Errata:—In our last issue, upon page 159, we published an article by Mr. A. Guiselin upon the manner by which a most economical petroleum light could be produced. As we stated the article appeared in a recent issue of the *Journal du Petrole*, but we omitted to make reference to our contemporary the *Illuminated Engineer* from which journal we culled the article in question. This omission was of course quite unintentional on our part.

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The American Oil Market.

New York, Week ended March 14th.

In the high grade fields of the Pennsylvanian classification, Brooke county of West Virginia remains well in the lead of the week's developments, the Halliday's Cove and the Follansbee pools contributing most materially to the State's production. A late completion in the latter pool recorded 165 barrels in the first eighteen hours, says the *Oil, Faint and Drug Reporter*, but later declined to about 100 barrels a day. The initial test in this section was reported to be holding up at 165 barrels a day. Another good producer within developments is credited with sustaining a flow of 60 barrels a day. The Halliday's Cove wells are maintaining an encouraging record, the aggregate being placed at about 1,100 barrels a day. Ritchie county, in the same State, has been the scene of successful operations, two wells of an initial capacity of 125 barrels a day each having been drilled in the Grant district. Several of the recent completions remain in the class of century or better producers. A well of unusual interest was reported in the Yellow Creek district of Calhoun county, West Virginia, which, while of comparatively light capacity, 15 or 20 barrels a day, was sufficiently in advance of defined limits to suggest that a new Berea pool may be developed in the locality. The week's record for West Virginia shews 41 completions, 11 dry holes and a new production of 1,073 barrels. The Clinton lime district of South-eastern Ohio has furnished some creditable results, a producer with an initial capacity of 125 barrels a day having been drilled in Richland township of Fairfield county. The Lima field of North-western Ohio and Indiana shews comparatively little activity, despite the recent enhancement of crude values, but operators are preparing for a busy season, and there is little doubt that the outlying districts will receive keener attention, especially in the Indiana end. Of principal interest in the Kentucky field has been the tendency of operators to depart from the old districts, and engage in wildcat work in new territory. The Caddo field of Louisiana is the scene of considerable activity, and as a result of recent completions the capacity of the field is placed at about 1,500 barrels. The Jennings field in the same State is also maintaining a creditable record, a late completion being reported good for 4,000 barrels of oil a day, while the gauge of another is said to have shewn an output at the rate of 1,000 barrels. Advices from our California correspondent note continued activity, especially in the Fullerton field, occasioned chiefly by the bringing in of a 400 barrel producer. The outlet of oil is on the increase and the Government announced recently its intention to equip its machine shops along the route of the Panama Canal with fuel oil from the State.

REFINED AND PRODUCTS.—No material change in the conditions affecting the local market for refined is to be noted. Domestic trading is reported to be of the same steady proportions, but the export movement has comprised a heavier volume. Clearances for the week have aggregated 10,965,120 gallons, of which 4,355,000 gallons were shipped in bulk. For the previous week we recorded 7,486,080 gallons (3,240,000 in bulk). Chartering has been fairly active, the following engagements being reported:—230,000 cases for May-June shipment to Hankow; 135,000 cases for April-May shipment to Australia and 28,000 cases for May-June shipment to Delagoa Bay, Durban or Port Louis, all New York loading, and 215,000 cases for April shipment to Kurachi and 7,500 barrels for prompt shipment to Marseilles, Philadelphia loading. No variation in prices is to be reported, the firm position of high grade crude influencing a corresponding effect on the various grades of refined. The more favourable weather during the week has been instrumental in prompting renewed interest in the products for gas-engine consumption, and it is believed the improvement will be well sustained as the season advances. Foreign requirements for naphtha comprise larger proportions, clearances for the week aggregating

135,300 gallons, against 60,250 gallons noted in the previous issue. Prices have undergone no change.

Residuum for export was in light request, the volume for the week aggregating 3,350 gallons.

CLOSING QUOTATIONS.

	CRUDE.	Week ended	
		Mar. 7.	Mar. 14.
	In cents per gallon.	1908.	1908.
Pennsylvania crude in bbls.	—	—
Pennsylvania crude in bulk	—	—
Residuum, bbls. for export	—	—

CRUDE AT THE WELLS.

The quotations for oil represented by credit balances were:—

		Week ended	
		Mar. 14.	Mar. 14.
		1907.	1908.
Pennsylvania	.. ..	\$1.63	\$1.78
Tiona	.. ..	1.73	1.78
North Lima	.. ..	0.92	1.04
South Lima	.. ..	0.87	0.99
Indiana	.. ..	0.87	0.99
Illinois, heavy, below 30 deg.	.. ..	—	0.60
Kansas and Indian Ter., 32 deg. and above	.. ..	0.40	0.41
Heavy	.. ..	—	0.28
Humble, Tex.	.. ..	—	0.73
Saratoga	.. ..	—	0.71
Sour Lake, Tex.	.. ..	—	0.75
Jennings, La.	.. ..	—	0.70
CANADIAN OIL:—			
Petrolia	.. ..	1.32	1.34
Oil Springs, less pipeage	.. ..	1.39	1.41

REFINED—FOR EXPORT.

		Week ended	
		Mar. 14.	Mar. 14.
		S.W.	W.W.
Barrels, cargo	.. .. per gal.	8.75	@ 10.75
Philadelphia	.. ..	8.70	@ 10.70
Bulk, New York	.. ..	5.00	@ 7.00
Bulk, Philadelphia	.. ..	4.95	@ 6.95
Cases, New York	.. ..	10.90	@ 13.90
Cases Philadelphia	.. ..	10.85	@ 13.85

REFINED IN CASES—110 FIRE TEST.

		Week ended	
		Mar. 7.	Mar. 14.
		1908.	1908.
3,000 to 10,000	.. ..	11.05	11.05
1,000 to 3,000	.. ..	11.10	11.10

REFINED—JOBGING LOTS.

In barrels, pkgs. included.

		Week ended	
		Mar. 7.	Mar. 14.
120 fire test, S.W.	.. in barrels	12	12
130 fire test, S.W.	.. ..	12½	12½
150 fire test, W.W.	.. ..	13½	13½
In bulk from tanks	.. ..	10	10
300 fire test	.. ..	13½ @ 14	13½ @ 14

NAPHTHA AND GASOLINE.

		Week ended	
		Mar. 7.	Mar. 14.
Naphtha, Auto, 66 @ 72 deg.	.. ..	14.00	14.00
Gasoline, 86 deg.	.. ..	23.00	23.00

PENNSYLVANIAN OIL RUNS from Feb. 26th to Mar. 9th were:—Feb. 26th, 287,869; Feb. 27th, 111,335; Feb. 28th and 29th, 204,099; Mar. 1st, 12,716; Mar. 2nd, 61,383; Mar. 3rd, 297,024; Mar. 4th, 96,971; Mar. 5th, 184,122; Mar. 6th and 7th, 310,631; Mar. 8th, 102,921; and Mar. 9th, 93,670.

THE DELIVERIES OF PENNSYLVANIAN OIL from Feb. 27th to Mar. 10th were:—Feb. 27th, 165,234; Feb. 28th, 200,354; Feb. 29th, 177,894; Mar. 1st, 137,001; Mar. 2nd, 191,738; Mar. 3rd, 156,120; Mar. 4th, 207,533; Mar. 5th, 155,841; Mar. 6th, 193,032; Mar. 7th and 8th, 315,710; Mar. 9th, 198,114; and Mar. 10th, 175,765.

CLEARANCES FOR THE WEEK.

During the week ended Mar. 13th and since Jan. 1, the clearances of petroleum, in gallons, from the port of New York, were as follows:—

		Week.	Year.	1907.
Refined	.. ..	10,965,120	100,497,000	101,063,260
Crude	.. ..	45,000	1,583,610	787,370
Naphtha	.. ..	135,300	1,119,570	1,597,980
Residuum	.. ..	3,350	573,900	143,500

EXPORT STATISTICS.

The total exports from the port of New York and from the United States have been:—

		Gallons.
From New York, week ended Mar. 13th	.. ..	14,665,160
Total from New York, from Jan. 1st, 1908	.. ..	148,912,944
Same period last year	.. ..	135,538,444
Increase	.. ..	13,374,500
From United States, week ended Mar. 13th	.. ..	29,370,210
Total from United States, since Jan. 1st, 1908	283,151,747
Same period last year	257,234,660
Increase	25,917,087

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The "Review" Shipping List.

MARCH 27, 1908.

(The following abbreviations are used in this table:—L. Left; P. Passed; Arr. Arrived; Sp. Spoken; Tr. Trading.)

Vessel.	From.	For.	Latest Date and Position.	Vessel.	From.	For.	Latest Date and Position.
ALCHYMIST	Smyrna	Algiers	L. Mar. 16	EZIO	—	—	Coasting Peru
ALEMBIC	London	Lisbon	In Downs, Mar. 10	FRANCE MARIE ..	Santander ..	Vigo	L. Mar. 21
ALICE ISABELLE..	Philadelphia	Sables d'Olonne	P. Del. Break, Feb. 28	GEESTEMUNDE ..	Copenhagen	—	P. Helsingborg, Mar. 23
AMERICAN	Philadelphia	New York ..	Arr. Mar. 14	GENESSE	Sabine Pass	Liverpool ..	Cd. Newport News Mar. 16
APPALACHEE	San Francisco	Saigon	L. Feb. 21	GEORGIAN	Philadelphia	Rouen	P. Del. Break, Mar. 10
APSCHERON	—	—	At Trieste, Mar. 11 (to sail April 1)	PRINCE GOLDMOUTH	Batoum	Singapore ..	L. Aden, Mar. 12
ARAL	Philadelphia	Rotterdam ..	Arr. Mar. 23	GUTHEIL	Philadelphia	Danzig	L. Mar. 18
ARAS	Baltimore ..	London	L. Mar. 20	HAINAUT	Beyrout	Piræus	Arr. Mar. 21
ARGYLL	—	—	Coasting U.S. (Pacific)	HARRY	Port Arthur	Manchester	Arr. Mar. 23
ASHTABULA	San Francisco	Shanghai ..	Arr. Feb. 27	WADSWORTH	(Texas)	—	—
ASTRAKHAN	Hamburg ..	Philadelphia	In Tyne, Mar. 25	HELIOS	Bremen & Tyne	New York ..	P. Dunnet Head, Mar. 24
ATLAS	—	—	Coasting U.S. (Pacific)	HELIOS	Liverpool ..	Philadelphia	Arr. Mar. 19
AUGUSTA	Liverpool ..	Baltimore ..	L. Mar. 20	HERMIONE	Philadelphia	Hamburg	P. Del. Break., Mar. 16
AUGUST KORFF..	New York ..	Hamburg ..	In Port, Mar. 22	HOTHAM	Sunderland ..	Kustendje ..	P. Flambro' Hd.,
AUREOLE	Tyne	New York ..	P. Dunnet Head, Mar. 25	NEWTON	—	—	—
AZOV	—	—	Trading on W.C. of South Amca.	IMPERIAL	—	—	Tr. on Lakes btn. U.S.A. and Can.
BAKU STANDARD	Havre	Philadelphia	L. Mar. 17	IOANNIS COUTZIS	Rouen	Piræus & Batoum	L. Mar. 17
BALAKANI	Tyne	Batoum	P. Gibraltar, Mar. 17-18.	IROQUOIS	London & Barry	New York ..	Arr. Mar. 21
BATOUM	Tyne	Kustendje ..	L. Mar. 21	J.B.AUG.KESSLER	Batoum	Colombo....	In Port, Mar. 25
BAYONNE	Alexandria..	Batoum	L. Mar. 21	JAMES BRAND	London	Kustendje ..	P. Sagres, Mar. 23
BEACON LIGHT ..	Tyne	Havana	Arr. Mar. 16	JULES HENRI	New York ..	Marseilles ..	Arr. Mar. 23
BLOOMFIELD	Batoum	London	Arr. Mar. 25	KURA	Tyne	Kustendje ..	Off Ushant, Mar. 9
BORJOM	Batoum	Alexandria..	Arr. Mar. 15	LA CAMPINE	Baltimore ..	Dover	P. Prawle Pt., Mar. 25
BRILLIANT	Stettin & Tyne	Philadelphia	P. Dunnet Head, Mar. 20	LA FLANDRE	Philadelphia	Ghent	P. Lizard, Mar. 22
BROADMAYNE	Cette	Philadelphia	Arr. Mar. 19	LA HESBAYE	Antwerp	New York ..	L. Mar. 24
BULLMOUTH	Nagasaki ..	Palembang..	L. Mar. 19	LA MADELEINE ..	Algiers	Brest	Arr. June 16
BULYSESSES	Cardiff	Black Sea ..	L. Mar. 25	LA VIGUESA	Port Arthur	Buenos Ayres	L. Mar. 13
BURGERMEISTER	Danzig	Philadelphia	L. Tyne, Mar. 24	LACKAWANNA....	(Texas)	—	—
PETERSEN	—	—	—	—	Bengkalis ..	—	At Suez, Mar. 14-15
CALCUTTA	San Francisco	Shanghai ..	L. Feb. 21	LANSING	Pt. San Luis	San Francisco	Arr. Mar. 11
CAPTAIN A. F.	Hamburg	New York ..	Sp. Mar. 14, 56 N. 22 W.	LE COQ	Cette	Kustendje ..	L. Mar. 25
LUCAS	and Tyne	—	—	LOUTSCH	Batoum	Odessa	In Port, Mar. 16
CARDIUM	Soesoe	Samboe	Arr. Mar. 21	LUCERNA	Bergen	Tyne	Arr. Feb. 29
CATANIA	Pt. San Luis	San Francisco	Arr. Mar. 11	LUCILINE	New York ..	Cette	L. Mar. 22
CAUCASIAN	Tyne	Port Arthur	At Sand Key, Mar. 23	LUMEN	Tyne	Philadelphia	L. Mar. 24
CHARLOIS	Rotterdam ..	New York ..	Arr. Mar. 16	LUX	Rouen	New York ..	P. Prawle Pt., Mar. 24
CHESAPEAKE	New York & Lisbon	Cardiff	In Port, Mar. 25	MAKKAWEI	Kustendje ..	Marseilles ..	Arr. Mar. 24
CHESTER	Antwerp	Batoum	P. Gibraltar, Mar. 24	MANHATTAN	New Orleans	Bremen and Antwerp	L. Mar. 20
CIRCASIAN	—	—	—	MANNHEIM	New York ..	Hamburg ..	Arr. Mar. 9
PRINCE	—	—	—	MARGARETHA ..	London	Batoum	Cld. Constant'ple, Mar. 14
CLAM	River Plate..	Philadelphia	Arr. Mar. 25	MAVERICK	Seattle	San Francisco	Arr. Oct. 6
COL. E. L. DRAKE	Pt. San Luis	San Francisco	L. Mar. 11	METEOR	—	—	To Sail, Mar. 10
COWRIE	Aroe Bay ..	Europe	P. Perim, Mar. 22	MEXICAN PRINCE	Penarth	Philadelphia	L. Mar. 19
CUYAHOGA	Manchester	Philadelphia	Arr. Mar. 16	MIRA	Port Arthur	Liverpool ..	P. Cape Henry, Mar. 13
CYMBELINE	Port Arthur	Avonmouth..	L. Norfolk (Va.) Mar. 14	MUREX	(Texas)	Singapore ..	L. Mar. 24
CZAR NICOLAI II.	Hamburg ..	—	P. Dungeness, Mar. 22	NARRAGANSETT..	Balekappan	New York ..	P. Lizard, Mar. 19
DAGHESTAN	Batoum	Antwerp	In Port, Mar. 24	NERITE	London	—	Tr. in China Seas
DAKOTAH	Taketoyo ..	San Francisco	Arr. Mar. 16	NEW YORK	New York ..	Southampton	L. Mar. 21
DELAWARE	Philadelphia	Liverpool ..	In Port, Mar. 11	OAKWOOD	London	Cienfuegos..	P. Dover, Mar. 13
DEUTSCHLAND ..	Rotterdam ..	New York ..	P. Prawle Pt., Mar. 15	OBERON	Rangoon & Thameshaven	Cardiff	In Port, Mar. 25
DIAMANT	Philadelphia	Hamburg ..	L. Mar. 12	OCEAN	Amsterdam..	Philadelphia	Arr. Mar. 15
EDWARD	N. Orleans..	Port Arthur	Arr. Mar. 13	OILFIELD	Tyne	Philadelphia	Arr. Mar. 21
DAWSON	—	(Texas)	—	ORIFLAMME	Blaye	Philadelphia	P. Pt. de Grave, Mar. 1
ELAX	Samboe	Rotterdam..	In Port, Mar. 22	OSCEOLA	Barry	Montevideo	Arr. Mar. 16
ELISE MARIE	New York ..	Hamburg ..	Arr. Mar. 22	OTTAWA	Lisbon	N. Orleans or Galveston	L. Mar. 26
ENERGIE	Hamburg & Tyne	Philadelphia	P. Dunnet Head, Mar. 24	OURAL	Batoum	Liverpool & Manchester	P. Constant'ple, Mar. 18
ERIVAN	Barcelona ..	St. Louis (Rhône)	L. Mar. 23-24	—	—	—	—
ETELKA	Genoa	Kustendje ..	L. Mar. 14	—	—	—	—
EUPLECTELA	Rotterdam ..	Kustendje ..	P. Sagres, Mar. 22	—	—	—	—
EXCELSIOR	New York ..	Hamburg ..	Arr. Mar. 21	—	—	—	—

Vessel.	From.	For.	Latest Date and Position.	Vessel.	From.	For.	Latest Date and Position.
PALEMBANG	—	—	Tr. East Indies & China Seas	SOYO MARU	San Francisco & Gaviota	Yokohama ..	Arr. Mar. 19
PAULA	New York ..	Swinemunde.	L. Mar. 19	SPONDILUS	Freshwater..	Blexen	At Bremerhaven, Mar. 23
PECTAN	London and Emden	Galveston ..	P. Prawle Pt. Mar. 23	STANDARD	Tyne	Philadelphia	P. Dunnet Head, Mar. 25
PENNOIL.....	Rotterdam and Tyne	Philadelphia	P. Dunnet Head, Mar. 14	STROMBUS	Hong Kong	Balekappan	Arr. Mar. 19
PERLAK	Hong Kong..	Palembang..	L. Feb. 17	SUN	Philadelphia	Avonmouth	At New York, Mar. 7
PHOEBUS	Hamburg ..	New York ..	L. Tyne, Mar. 14	SUNLIGHT.....	Rivadesella..	Swansea	In Port, Mar. 25
PINNA	Gaviota	Yokohama ..	L. Mar. 1	SURAM.....	Kustendje ..	Dublin	P. Zea, Mar. 18
POTOMAC	Tyne	Philadelphia	Arr. Mar. 15	SUWANEE	Avonmouth..	Philadelphia	L. Mar. 23
PROMETHEUS....	Rotterdam ..	New York ..	Arr. Mar. 22	SVIET	Batoum	Odessa	L. Feb. 28
PRUDENTIA	Samboe	Shanghai ..	Prev. Mar. 19	TELENA	Singapore ..	Kobe	Arr. Mar. 23
QUEVILLY.....	Philadelphia	Rouen.....	L. Mar. 18	TEREK.....	Tyne	Port Arthur (Texas)	P. Prawle Pt. Mar. 14
RION.....	Kustendje ..	Manchester	P. Gibraltar, Mar. 20-21	TIFLIS	Philadelphia	Hamburg	L. Mar. 18
ROCK LIGHT	Ibrail	Amsterdam..	L. Sulina, Mar. 25	TIOGA	London	Sunderland..	P. Flambro' Hd. Mar. 24
ROMANY.....	London	Malta	P. Gibraltar, Mar. 17	TONAWANDA	San Francisco	Chingkiang..	L. Mar. 2
ROSSIJA	Middlesbro'	Tyne	L. Mar. 23	TROCAS	Balekappan	Hong Kong	Arr. Mar. 24
ROTTERDAM	Amsterdam..	New York ..	Arr. Mar. 15	TURBO.....	Batoum	Hamburg ..	Ashore Haaks, Jan. 7
RUSSIAN PRINCE	Philadelphia	Galveston & Vera Cruz	Arr. Mar. 8	TUSCARORA	New York ..	Calcutta	At Bombay, Mar. 13
SALAHADJI	—	—	Tr. Sts. Settlem'ts and Java Seas	TWINGONE	Rangoon....	Madras	Arr. Dec. 12
SAN CRISTOBAL..	Rochester ..	Minatitlan ..	L. Mar. 17	VEDRA.....	Singapore ..	Yokohama ..	L. Mar. 3
SAN IGNACIO	Philadelphia	Pasages	Arr. Feb. 15	VILLE DE DIEPPE	Philadelphia	Rouen	P. Havre, Mar. 23
DE LOYOLA	—	—	—	VOLUTE	Balekappan	Shanghai ..	L. Mar. 19
SAXOLEINE	Tyne	New York ..	P. Dunnet Head, Mar. 22	WASHINGTON....	Hamburg & Tyne	New York ..	P. Butt of Lewis, Mar. 14
SEMINOLE.....	San Francisco	Shanghai ..	L. Feb. 24	WEEHAWKEN	Sunderland	Kustendje ..	P. Sagres, Mar. 15
SINGU	—	—	Tr. in East Indies	WILLKOMMEN....	New York ..	Hamburg ..	L. Mar. 17
SNOWFLAKE.....	Newport	Kustendje ..	P. Gibraltar, Mar. 20	WINNEBAGO	Hong Kong	San Francisco	Arr. Mar. 16

Latest Market Intelligence.

LONDON OIL MARKET.

Supplied by Messrs. Benjamin & Gee, 31, St. Mary Axe, E.C.

March 27th, 1908.

The price of Petroleum is unaltered since our last report, quotations being:—Russian, 5⁷/₈d. to 6d.; American, 6¹/₂d. to 6⁵/₈d.; Water White, 7¹/₂d. to 7⁵/₈d.; Roumanian, 6³/₄d.

LUBRICATING OILS.

The latest quotations are:—

American pale, £7 7s. 6d. to £11.

American dark cylinder, from £9 2s. 6d.

American filtered cylinder, from £11 15s.

No. 1 Russian, £10 5s.

TURPENTINE.

American Turpentine has been as high as 40s. 6d., but to-day's figures are:—Spot, 39s. 6d.; May-June, 38s. 10¹/₂d.; July-December, 37s. 6d.

LIVERPOOL OIL MARKET.

March 27th.

Refined oils are quiet, and sellers quote 6³/₄d. for Russian, Galician or Roumanian; and 7¹/₄d. to 8¹/₄d. per gallon for American.

PETROLEUM SPIRIT continues at 1s. 0¹/₂d. to 1s. 3d. per gallon for American deodorised, according to quality on the spot.

LATEST AMERICAN PRICES.

NEW YORK, March 26th.

Refined, in cases, is steady at 10.90; Standard White, 8.75; Credit balances, 1.78c.

PHILADELPHIA, March 26th.

Standard White is still quoted at 8.70.

RUSSIA.

BAKU, March 21st.

The Baku oil market is steady. Crude oil, spot, 27¹/₈-27⁷/₈ copecs per pood. Residuals, spot, 28¹/₂ copecs. Kerosene, in ships, delivery March, 32¹/₂ copecs.

BELGIUM.

ANTWERP, March 21st.

The petroleum market is firm. Price of Standard White, spot, 22 francs per 100 kilos.

FRANCE.

PARIS, March 21st.

Illuminating oil is quoted in bulk, in whole tank waggons, 21 francs per hectolitre; spirit, 31.75 francs per hectolitre. Special white oil, in barrels or cans, 29 francs per hectolitre.

GERMANY.

HAMBURG, March 21st.

The kerosene market is quiet. The price of American Standard White is 7.55 marks per 50 kilos; Russian, 7.35 marks.

ROUMANIA.

March 23rd.

Crude oil from different fields, including	Franks.
pipe line charges, per 100 kgs. ...	4.50-4.60
Refined oil, exclusive of taxes ..	6.00-6.50
Benzine, 717-720, including taxes ...	20.00
Benzine, 750-760 ...	14.00
Residuals in tank waggons, at refinery ...	3.90-4.00
Paraffin ...	120.00-125.00

PRICES FOR EXPORT.

Refined oil in tank waggons, per 100 kgs.	6.80-7.30
Benzine, sp. gr. 0.710-0.715, f.o.b. ...	17.00-18.00
" sp. gr. 0.715-0.720 " ..	15.00-16.00
" sp. gr. 0.730-0.740 " ..	10.00-11.00
" sp. gr. 0.745-0.755 " ...	9.00-10.00

INDIA.

BOMBAY, March 7th.

Standard Oil Co., of New York.

Current rates are:—

American, "Snowflake," 150 deg. ..	Rs. 6 4 2
" Chester, 76 deg. ..	4 12 2
" Monkey Brand, 76 deg. ..	4 6 2
" Bulk, 125 deg. (in local made tins)..	3 13 6
" " 125 deg. (8 Imperial gallons) ..	3 3 6

The Asiatic Petroleum Company, Limited.

Current rates are:—

Burmah oil, in tins, per pair ..	3 8 0
Russian "Rising Sun," bulk, per unit ..	3 6 0
" " tins, per pair ..	4 0 0
Roumanian oil, in tins, per pair ..	3 14 0
"Anchor" per case ..	4 8 0

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IMPORTS of PETROLEUM into UNITED KINGDOM

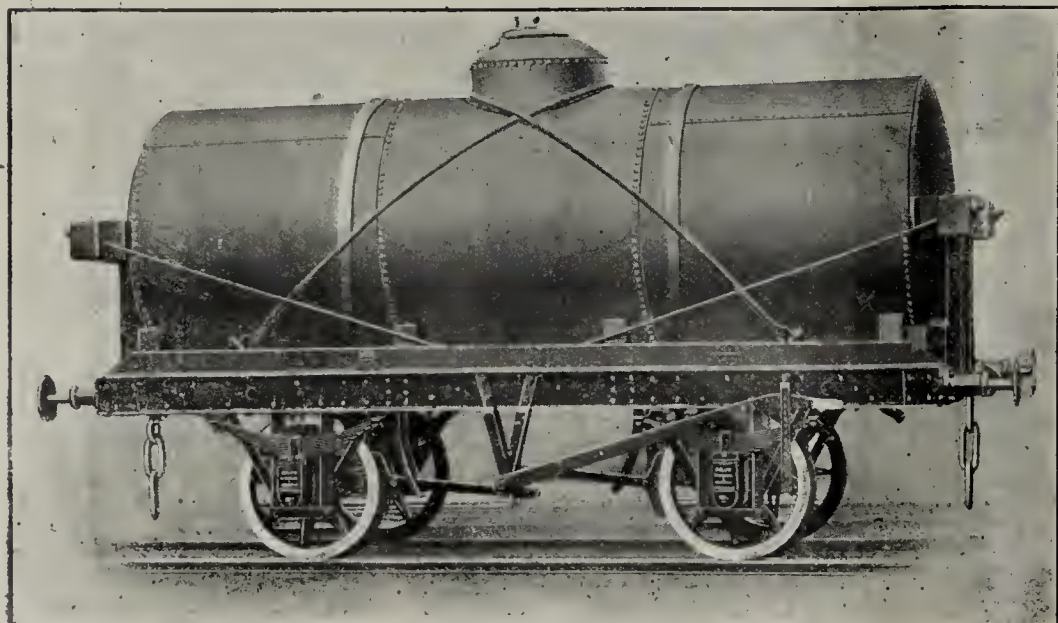
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FOR THE WEEK ENDED 16TH MARCH, 1908—

DATE.	PORT AND IMPORTERS.	DESCRIP- TION.	NO. OF GALS.	PORT WHENCE.
Mar. LONDON—				
10	London and India Dock Co.	Lub.	800	New York
10	A. Duckham and Co.	..	6,400	Philadel.
10	Fielder, Hickman and Co..	..	15,400	New York
10	Anglo-American Oil Co.	..	32,360	"
10	Anglo-American Oil Co.	Gas	1,260,000	Philadel.
	(James Brand)			
11	London & India Docks Co..	Lub.	2,720	Hamburg
12	Page, Son and East	.. Lub.Gr.	240	Antwerp
12	Geo. Holder and Co.	.. Lub.	200	"
12	W. B. Dick and Co.	..	16,130	Philadel.
12	Beck and Pollitzer	..	530	New York
13	London and India Dock Co.	..	800	"
13	A. Brown and Co.	..	4,000	Philadel.
13	Mordaunt Bros.	..	2,500	"
13	Worthington and Boler	..	4,400	"
13	Ocean Oil Co.	..	6,800	"
13	Langley, Smith and Co.	..	2,400	"
13	Union Lighterage Co.	..	1,920	Antwerp
13	R. Park and Co.	..	600	Marseilles
14	Schlieman's Oil Co.	..	4,500	New York
14	Lubricating & Fuel Oils, Ltd.	..	14,760	Philadel.
14	"	..	4,100	"
14	Anglo-American Oil Co.	..	257,800	New York
	(Narragansett)			
14	"	Lamp	2,653,490	"
15	Asiatic Petroleum Co.	Benzine	1,094,620	Pulo Samboe
	(Spondilus)			
15	London and India Docks Co.	Lub.	70	Hamburg
15	Page, Son and East	..	240	Antwerp
15	Lubricating & Fuel Oils, Ltd.	..	4,920	Philadel.
15	Perkins and Homer..	..	2,400	"
15	M. Record	..	2,400	"
15	A. Brown and Co.	..	9,400	"
15	Mercantile Lighterage Co..	..	30,800	"
15	Anglo-American Oil Co.	..	17,000	"
15	"	..	98,920	"
15	Union Lighterage Co.	..	34,880	"
	LIVERPOOL—			
10	Meade-King, Robinson & Co.	..	9,640	"
10	"	..	9,400	"
10	Liverpool Warehousing Co.	..	320	New York
13	Burnaby and Chantrell	.. L.Comp.	1,120	"
14	Vacuum Oil Co.	.. Lub.	35,400	"
14	"	.. Lub.Gr.	1,400	"
14	Anglo-American Oil Co.	Gas	864,690	Philadel.
	(Augusta)			
14	Meade-King, Robinson & Co.	Lub.	22,080	Baltimore
16	W. Gibson and Sons	.. Lamp	4,100	Boston
16	Langley, Smith and Co.	.. Lub.	2,160	New York
16	Vacuum Oil Co.	..	8,000	"
16	Railton, Campbell & Crawford	L.Comp	670	"
16	W. B. Dick and Co.	.. Lamp	1,820	"
16	G. B. Taylor	.. Lub.	14,000	"

DATE.	PORT AND IMPORTERS	DESCRIP- TION.	NO. OF GALLS.	PORT WHENCE.
March				
16	Geo. B. Taylor	.. Lub.	320	New York
16	Bahr Behrend and Co.	..	270	Hamburg
16	Pickfords, Ltd.	..	150	"
	BRISTOL—			
10	Pickford's, Ltd.	..	240	Antwerp
10	H. R. James and Sons	..	6,000	New York
10	H. Pritchard and Co.	..	2,140	"
10	"	..	2,520	Philadel.
10	H. Matthews	..	1,250	"
12	M. Whitwell and Sons	..	11,800	"
12	J. Hare and Co.	..	2,130	New York
12	O. Pragnell and Co..	.. Lub.Gr.	240	Antwerp
12	Pickfords	.. Lub.	1,000	Hamburg
16	British Petroleum Co.	..	790	Antwerp
16	W. Smith and Co.	..	18,880	New York
	CARDIFF—			
14	Guthrie, Heywood and Co.	..	2,700	Baltimore
	GLOUCESTER—			
10	Bristol Steam Nav. Co.	..	30	Hamburg
	GOOLE—			
12	Lancs. and Yorks. Railway	..	600	Antwerp
	GRIMSBY—			
12	J. Sutcliffe and Son ..	..	120	Hamburg
12	"	..	410	Antwerp
12	"	..	160	"
	WEST HARTLEPOOL—			
13	W. Hartlep'l Steam Nav. Co.	..	40	Hamburg
	HARWICH—			
12	D. Howard	..	140	Antwerp
12	"	..	80	"
	HULL—			
10	W. Gilyott and Co.	..	57,000	New York
12	G. Hardy and Co.	..	140	Antwerp
12	Wilsons and N.E. Railway	..	330	Hamburg
	Shipping Co.			
12	Hull & Netherlands S.S. Co.	..	480	Rotterdam
12	"	.. Tar Oil	2,400	"
12	T. Wilson, Sons and Co.	.. Lub.	2,000	Hamburg
12	"	..	120	Reval
12	"	..	240	Antwerp
13	"	..	2,600	New York
13	"	..	28,560	"
13	T. Meredith Roberts and Co.	..	300	Reval
	MANCHESTER—			
12	J. T. Fletcher and Co.	..	600	Antwerp
16	William Cartage	..	40	New York
16	Meade-King, Robinson & Co.	..	4,240	"
16	George B. Taylor	..	263,720	"

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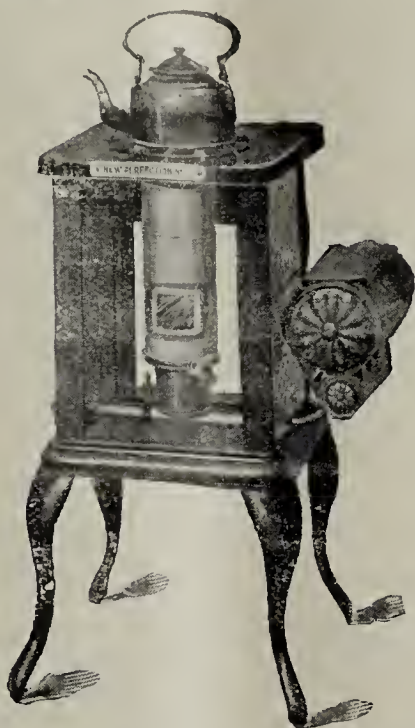
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Best Welsh Soft Siemens-Martin Steel.
No imported steel used.

— QUOTATIONS ON APPLICATION.

IMPORTS.—(Concluded).

DATE.	PORT AND IMPORTER.	DESCRIPTION.	NO. OF GALLS.	PORT WHENCE.
Mar.	MIDDLESBRO'			
13	E. Harris and Co.	.. Lub.	1,000	Antwerp
13	"	.. "	90	"
	NEWCASTLE—			
10	Tyne-Tees Steamship Co. ..	..	5,280	"
	PLYMOUTH—			
16	Plymouth and Stonehouse Gas Co. (Ottawa) ..	.. Resid.	582,290	Sabine
	SWANSEA—			
12	Bristol Steam Navigation Co.	Lub. Gr.	960	Antwerp
	ABERDEEN—			
16	R. Connon, Reid and Co.	Lamp	1,200	Hamburg
	GLASGOW—			
11	Anchor Line ..	.. Lub.	55,240	New York
11	J. and A. Allan ..	..	129,440	Philadel.
11	" ..	.. M. Colza	28,000	"
12	Clyde Shipping Co. ..	.. Lub. Gr.	280	Antwerp
14	Mordaunt Bros. ..	.. Lub.	4,000	New York
16	Anchor Line ..	..	56,090	"
16	" ..	.. M. Colza	2,000	"
	GRANGEMOUTH—			
13	W. Graham-Yooll and Co. ..	Lamp	3,200	Hamburg
13	J. Currie and Co. ..	.. Lub.	2,000	"
	LEITH—			
10	J. Currie and Co. ..	.. Lamp	2,700	Stettin
10	G. Gibson and Co. ..	.. Lub.	1,280	Antwerp
12	" ..	..	1,680	"
16	" ..	..	1,100	"
	LERWICK—			
10	Horrona Co. ..	..	200	Sandefjord
	Total for Week ..	..	7,856,210	

Deduct to correct:—

	LIVERPOOL—			
9/3	Meade-King, Robinson & Co.	Spirit	1,600	Rotterdam

FOR THE WEEK ENDED 23RD MARCH, 1908—

	LONDON—			
17	H. Funck and Co. ..	.. Lub.	1,230	Philadel.
17	Lub. and Fuel Oils Co. ..	..	6,230	"
17	Fielder, Hickman and Co. ..	..	11,850	New York
17	W. H. J. Alexander ..	..	2,400	"
17	Anglo-American Oil Co. (Ottawa)	Gas	132,070	Sabine
17	" ..	Fuel	266,930	"
18	" ..	Lub.	17,000	New York
18	Lub. and Fuel Oils, Ltd. ..	..	4,920	"
18	Produce Brokers' Co. ..	..	14,400	"
18	Livett Frank and Son ..	..	800	"
18	Mordaunt Bros. ..	..	12,850	"
18	E. J. Walkinshaw ..	..	10,000	Philadel.
18	A. Brown and Co. ..	..	7,400	"
18	London and India Docks Co. ..	..	480	Hamburg
19	T. H. Lee ..	..	850	Rotterdam
19	Asiatic Petroleum Co. (Spondilus)	.. Benzine	461,760	Aroe Bay
19	G. and H. Green ..	.. L. Comp.	4,330	New York
19	Mordaunt Bros. ..	.. Lub.	2,100	"
20	Beck and Pollitzer ..	..	220	"
20	Anglo-American Oil Co. (Tioga)	Gas	690,710	Sabine
20	Homelight Oil Co. (Bloomfield)	Lamp	610,870	Batoum
20	J. Harrison ..	.. Lub.	130	Antwerp
21	Craven and Co. ..	..	100	Hamburg
21	Anglo-American Oil Co. (City of Everett)	Gas	981,060	Philadel.
23	Worthington and Boler ..	.. Lub.	2,000	"
23	Bowring Petroleum Co. ..	..	8,820	"
23	Lubricating & Fuel Oils, Ltd. ..	..	2,460	"
23	Scott's Wharf ..	..	4,020	New York
23	London and India Docks Co. ..	..	2,520	Hamburg
23	Page, Son and East ..	..	280	Antwerp
	LIVERPOOL—			
17	J. Light and Son ..	.. Lub. Gr.	280	"
17	" ..	.. Lub.	2,000	Hamburg
17	" ..	..	2,000	New York
17	G. B. Taylor ..	..	1,000	"
18	Ismay, Imrie and Co. ..	..	1,200	"
18	Meade-King, Robinson & Co. ..	..	6,800	"
18	" ..	..	400	Baltimore
18	Stockdale and Doel ..	..	2,940	Boston
18	Gandy Belt Manufacg. Co. ..	L. Comp.	170	Antwerp
19	Meade-King, Robinson & Co. ..	.. Resid.	4,000	Trieste
20	Liverpool Warehousing Co. ..	.. Lub.	5,040	Reval
21	Meade-King, Robinson & Co. ..	..	4,100	Hamburg
21	" ..	..	5,600	Baltimore
21	Van Oppen and Co. ..	..	160	New York
23	Valvoline Oil Co. ..	..	2,050	"
23	" ..	..	12,920	"
23	Vacuum Oil Co. ..	..	11,280	"
23	W. B. Dick and Co. ..	..	15,930	"
23	Geo. B. Taylor ..	..	47,360	"
23	" ..	..	53,200	Philadel.

DATE.	PORT AND IMPORTERS.	DESCRIPTION.	NO. OF GALLS.	PORT WHENCE.
23	Bowring Petroleum Co. ..	.. Lub.	1,870	Philadel.
23	Crew, Levick and Co. ..	..	19,820	"
23	" ..	.. M. Colza	9,250	"
23	W. B. Dick and Co. ..	.. Lub.	23,300	"
23	American Line ..	..	48,000	"
23	E. Harrison and Co. ..	..	35,200	"
23	Worthington and Boler ..	..	7,400	"
23	Midland Railway ..	..	1,070	"
23	Meade-King, Robinson & Co. ..	..	5,200	Baltimore
23	A. J. Patterson and Co. ..	.. Resid.	7,880	"
23	Co-operative Wholesale Soc. ..	.. Lub.	560	Boston
23	Liverpool Storage Co. ..	..	1,200	Hamburg
23	G. Smart ..	..	400	"
23	Burnaby and Chrantrell ..	.. L. Comp.	170	Antwerp
23	Penwarden and Jackson ..	.. Lub.	250	"
	BRISTOL—			
17	M. Whitwell and Co. ..	..	2,010	Philadel.
17	H. R. James and Sons ..	..	20,000	New York
17	John Hare and Co. ..	.. Lamp	2,100	"
18	Pickford's, Ltd. ..	.. Lub.	750	Hamburg
23	Francis Barnard ..	..	10,400	"
23	H. Matthews and Co. ..	..	400	"
23	Colhurst and Harding ..	..	2,400	New York
23	First Anglo-Russian Oil Co. ..	..	6,780	"
	GOOLE—			
20	Lancs and Yorks Railway ..	Tar Oil	230	Hamburg
	GRIMSBY—			
17	J. Sutcliffe and Son ..	.. Lub.	280	"
17	" ..	..	240	Antwerp
19	" ..	..	2,400	"
21	" ..	..	200	"
21	" ..	..	40	Hamburg
	WEST HARTLEPOOL—			
22	West Hartlepool S.N. Co. ..	..	390	"
	HARWICH—			
17	D. Howard ..	.. Lub. Gr.	180	Antwerp
19	" ..	.. Lub.	50	"
	HULL—			
17	Wilsons and N.E. Railway Shipping Co. ..	..	3,560	"
17	" ..	..	1,200	"
17	W. Gilyott and Co. ..	..	53,400	New York
19	" ..	..	2,600	"
19	Hull & Netherlands S.S. Co. ..	..	240	Amsterdam
19	Wilsons and N.E. Railway Shipping Co. ..	..	1,100	Hamburg
21	Meade-King, Robinson & Co. ..	Naph.	19,000	Rotterdam
	MANCHESTER—			
17	J. T. Fletcher and Co. ..	.. Lub.	1,300	Antwerp
19	" ..	..	200	"
19	George B. Taylor ..	..	1,840	Hamburg
19	Bramwell, Fern and Co. ..	..	2,450	New York
19	W. Hodgson and Co. ..	.. Lub. Gr.	1,650	"
19	G. W. Sheldon and Co. ..	.. Lub.	50	"
19	Liverpool Storage Co. ..	..	3,800	"
19	" ..	.. Lub. Gr.	2,460	"
19	Worthington and Boler ..	.. Lub.	1,480	Philadel.
19	Crew, Levick, and Co. ..	..	13,070	"
19	" ..	.. M. Colza	11,590	"
20	George B. Taylor ..	.. Lub.	174,000	"
21	Meade-King, Robinson & Co. ..	..	38,000	"
21	C. H. Morton and Sons ..	..	4,400	"
21	Meade-King, Robinson & Co. (Harry Wadsworth)	Gas	760,000	Pt. Arthur
	MIDDLESBRO'—			
19	Hansom, Brown and Co. ..	.. Naph.	15,600	Rotterdam
19	J. J. Sutherland ..	.. Lub.	1,000	Antwerp
	NEWCASTLE—			
17	Tyne-Tees S.S. Co. ..	..	1,400	"
17	" ..	..	50	Hamburg
21	" ..	..	1,600	"
21	" ..	..	5,440	Antwerp
	NEWPORT—			
23	Mordey, Jones and Co. ..	..	180	"
	SOUTHAMPTON—			
19	American Line ..	..	980	New York
19	White Star Line ..	..	27,840	"
	GLASGOW—			
23	Anchor Line ..	..	55,000	"
	GRANGEMOUTH—			
20	W. Graham-Yooll and Co. ..	Lamp	3,960	Hamburg
20	" ..	..	6,080	"
23	J. Currie and Co. ..	.. L. Paste	110	"
	LEITH—			
18	J. Currie and Co. ..	.. Lub.	260	"
18	W. Graham-Yooll and Co. ..	Lamp	6,540	"
18	Henderson and McIntosh ..	.. Lub.	13,600	Philadel.
23	Geo. Gibson and Co. ..	..	2,000	Antwerp
	BELFAST—			
19	J. C. Pinkerton and Co. ..	..	300	Hamburg
	Total for Week ..	..	4,888,970	
	Total for the Fortnight ..	..	12,745,180	

Deduct to correct—

	LONDON—			
5/3	Anglo-Saxon Oil Co. (Pectan)	Fuel	84,630	Pt. Arthur

The Petroleum Review.

By PAUL DVORKOVITZ.

Vol. XVIII. (New Series.)

APRIL 11TH, 1908.

No. 422.

THE PETROLEUM REVIEW:

The ANNUAL SUBSCRIPTION for both English and Foreign readers is 26s., including Postage. Single Copies may be had at the offices at 1s.

The Editor would esteem it a favour if readers, when communicating with the various firms advertising in our pages, would mention the "Review."

Contributions upon items of interest are always welcomed from subscribers, but in each case these should be accompanied with the name and address of the sender, not necessarily for publication.

Editorial Notes.

We deeply regret to announce the **The Late** decease of Col. H. F. Swan, a gentleman who has so long been closely associated with the petroleum industry, by reason of the active part he took in the design of and improvements in relation to oil tankers. For almost a quarter of a century he has taken practical control of that enormous Walker shipyard, and under his great care, the business of Sir W. G. Armstrong, Whitworth and Co. has grown to be one of the large shipbuilding centres in the world. It has built many vessels of many types, but none more interesting than those which are now to be found almost upon every sea in the world engaged in carrying petroleum in bulk. Col. Swan knew the requirements of the oil transport trade, and he also quickly saw the problems to be solved and the difficulties to be overcome. Thus it was that, putting his knowledge and his experience into the balance, he evolved a type of steamer which proved so thoroughly satisfactory that the Walker yards have for many years enjoyed something approaching a monopoly in the construction of oil-carrying steamers, for approximately one hundred oil tankers have already left the stocks at Walker. But amidst all the hard and incessant work entailed by being in such a responsible position as director of the great shipbuilding yard, Col. Swan never forgot the social claims of the community in which he lived, for he was one who gave to good causes with a lavish hand. We are sure all our readers will join with us in expressing our sincere regret at the decease of a gentleman who has been so universally respected, and whose works in connection with the transport of oil, have proved of such great value to the industry at large.

A most noticeable change has lately overtaken the Baku oil market. The firmness which characterised the tone of the market first became quiet on the 21st of March, inactive on the 26th, and a couple days later became weak and prices of crude oil also weakened accordingly. For instance, on the

21st of March, the quotations for crude oil, spot, were $27\frac{7}{8}$ and $27\frac{1}{2}$ copecs; on the 27th of March the price was 26 copecs; and on the 28th heavy Balakhany crude was quoted $25\frac{1}{2}$ -26 copecs, and light crude 26, $25\frac{1}{2}$, and $25\frac{5}{8}$ copecs. On the Volga, the market continues stagnant, and prices are unchanged. At Saratoff, kerosene sells 115-116 copecs, and residuals 38 copecs per pood. At Czaritzin, Nobel and Mazout sell kerosene at 115 copecs, other firms at 109 copecs; green residuals are sold there at 40 copecs, black residuals 42 copecs, crude oil 45 copecs per pood. The opinion is generally held that the Baku market will continue to display a weak tone, and, in view of this, forward contracts are few.

The pointed extracts which we reproduce upon another page of an article upon petroleum from the pen of the well-known Vice-President of the Standard Oil Co.—Mr. John D. Archbold—tell, in a most convincing way, the great and valuable work which the Standard has done in bringing forward the claims of American petroleum, and raising the industry of that country to a position which places it far above all others, the whole world through. Mr. Archbold knows of what he speaks, and we are in full sympathy with him when he says that the criticisms urged against his company, expose their great weakness in the failure to recognise or acknowledge the magnificent expansion of the American petroleum trade in which the principal factor has been the Standard. No better illustration of the growth of the American petroleum industry can be found than the figures which are quoted in Mr. Archbold's article, and when one remembers that in thirty years, the development of America's oil production has increased thirty-fold, surely the critics of the Standard must be aware of the unreasonable and unjustifiable attitude they are taking up. We wonder what other industry can shew such remarkable progress, even in go-ahead America.

Considering that February is the shortest **American** month in the year, we may say that the **Exports** American export trade for that month was **during** in a remarkably active state, for the record **February.** of mineral oils exported has never been exceeded. In all, they amounted to nearly 105,000,000 gallons, and both in amount and value they by far exceeded the very satisfactory figures for the first month of the year. For the eight months ending with February 29th, 1908, the total exports of mineral oils were 850,501,220 gallons in amount and \$61,867,486 in value, as compared with 776,642,859 gallons, valued at \$52,506,768, for the eight months ending February 28th, 1907. This was a gain of 73,858,361 gallons in amount and \$9,360,718 in value. The exports for February were distributed as follows:—Crude, 9,152,811 gallons; naphtha, 1,665,922 gallons; illuminating oils, 75,751,537

gallons; lubricating oil and paraffin, 12,151,564 gallons; residuum, 6,273,789 gallons. The total mineral oils shipped from New York was 57,462,787 gallons; Philadelphia, 41,658,803 gallons; Baltimore, 391,650 gallons; Sabine, 5,449,649 gallons; Boston, 21,156 gallons; and Galveston, 11,578 gallons. The figures above given most conclusively shew that the American petroleum export trade is making real and rapid headway.

THE OIL FIELDS OF RUSSIA.

SECOND EDITION OF MR. A. BEEBY THOMPSON'S WORK.

The second edition of Mr. A. Beeby Thompson's work upon "The Oil Fields of Russia" has just left the press, and we must congratulate both author and publisher upon the presentation of such a valuable and well executed publication. Many improvements have been introduced into the second edition, and much additional matter added, making the work thoroughly up-to-date, and of greater value than was the first edition—if this could be possible—to those thousands who have a direct interest in the Russian petroleum industry. Since the first edition left the press—about four years ago—the Russian industry has passed through an epoch-making period of its history, and to a more or less degree the oil fields themselves have seen the hand of revolution. With the renewal of exploitation after the strikes and incendiary fires, the old order gave place to the new, and prominent among the more up-to-date methods adopted, electric power came in for a good share of attention. In preparing his second edition, Mr. Thompson has not been unmindful of the change for the better that has overtaken the Russian industry, and the various pages of the edition afford unmistakable evidence that he has brought the publication right up to date. The price of the work has been cut to one half—it is now one guinea—and though a few bulky tables have been dropped, the edition has not in the slightest been allowed to lower the standard of general excellence so conspicuous in the first edition. The second edition of "The Oil Fields of Russia" should certainly receive a good reception.

LAUNCH OF THE TANKER "SERVIAN."

The tank steamer "Servian," built to the order of Messrs. Lane and Macandrew, of Great St. Helens, E.C., by the firm of Sir James Laing and Sons, Ltd., was successfully launched last week at Sunderland, in the presence of a large company of guests. The tanker has been specially designed to carry various kinds of petroleum products in one cargo, having been superintended during construction by Messrs. Flannery and Given, of Liverpool. The tankers dimensions are: Length, 365 feet, beam 51 feet, and moulded depth 30 feet 2 inches. She will carry a cargo of 7,000 tons of oil.

The Anglo-American Oil Co., Ltd., London, have placed an order with the Greenock and Grangemouth Dockyard Co., Ltd., for the construction of a small oil-tank steamer.

THE GROSNY OIL FIELDS DURING FEBRUARY.

The statistics of the production of crude oil for February at Grosny are not yet available, but it can now be safely stated that the month yielded the largest monthly output that has been obtained in Grosny for many years. The month abounded in spouters. In addition to the two spouting wells on the Akhverdoff Co.'s plot No. 22, which are flowing continuously, there were other spouters. On plot No. 7 of the Executors of Maximoff (formerly of the Alkhan-Yurt Co.), a well was completed in the latter half of 1907 at a depth of 2,176 ft., and produced altogether 300,000 poods. The activity of this well called forth a spouter also from No. 44 on the Ermoloff plot of the Akhverdoff Co., which has been baled for many years but never spouted. Further, on plot No. 40 of the Spies Petroleum Co., Ltd., for the past two months, a spouter has been flowing continuously from a depth of 1,197 ft. The total production of crude oil at the Grosny oil fields for the month exceeded 4,000,000 poods.

LOSS OF THE STEAMER "HELIOS."

During the present week, another oil tanker—the "Helios"—has been lost in the Atlantic. Until quite recently the tanker was known as the "Oranje Prince" and was one of the Prince line of oil carriers, having been built in 1889 at Newcastle. Her dimensions were: length 260 feet, breadth 36 feet, and depth 25.7 feet. Her gross tonnage was 1,931, and her engines were of 156 horse-power. The tanker was recently purchased by the Valloe Co. of Norway, and was carrying a full cargo of crude oil from Philadelphia to Bordeaux, this being her first trip, so we understand, with her new proprietors. A start was made from the port of loading on March 24th, and very bad weather was encountered in the Atlantic. Last Saturday the stress of the heavy seas are said to have burst three tanks. The oil poured into the bunkers, and also the stokehold, it then being recognised that the "Helios" was doomed. The crew was picked up in Mid-Atlantic by the liner "Majestic," and on Wednesday landed at Plymouth. The "Helios" foundered.

THE TIN PLATE MARKET.

Messrs. Norton, Owen & Co., of 4, Bishopsgate Street Within, London, E.C., report under date April 10th, 1908, as follows:—

The quarterly meeting of the Steel and Tin Plate trades was held at Birmingham yesterday. The market was exceedingly firm, and makers for the most part appear to be indifferent as to selling forward, except at full prices, being very fully booked. Oil sizes are firm at the undernoted prices:—

1C	18 $\frac{3}{4}$ × 14	124 sheets	110 lbs.	13/1 $\frac{1}{2}$ per box.
1C	19 $\frac{1}{4}$ × 14	120 "	110 "	13/1 $\frac{1}{2}$ "
1C	20 × 10	225 "	156 "	18/1 $\frac{1}{2}$ "

F.o.b. Wales. Tin lining and iron hooping extra.

DEATH OF COLONEL H. F. SWAN, C.B.

A Pioneer in the Design of Oil Tankers.

The news of the decease of Col. Henry F. Swan, the High Sheriff for Northumberland, one of the managing directors of the well-known firm of Sir W. G. Armstrong, Whitworth and Co., and one of the pioneers in the design of oil-carrying vessels, will be received with general regret by our readers in all parts of the world. Col. Swan had suffered from an affection of the heart for some time, but the end came sudden, for he was found dead in bed just at the time when he had expected to be on his way to the shipyard.

The deceased gentleman was born on September 10th, 1842, at West Farm, Walker. He was educated privately, and, when 16 years of age, commenced his apprenticeship with the late firm of Messrs. C. Mitchell and Co., shipbuilders, in 1858. In a later stage in his career, Mr. Swan proceeded to Russia to superintend the construction of vessels for the Russian Navy, for which Messrs. C. Mitchell and Co. had received the order. These vessels were the "Netron Menya," "Prince Pojarski," "Rousalka," "Charodaika," and "Smertch," and when Mr. Swan left Russia the Tzar presented him with a valuable diamond snuff-box, in recognition of his services to the Russian Navy.

Owing to ill-health, Mr. Charles Mitchell, the senior partner of the firm, took up his residence at Surbiton, and on the return of Mr. Swan to England, he took charge of the Walker Shipyard, and had seen the works grow from a very small yard to one of the best equipped shipbuilding establishments in the Kingdom.

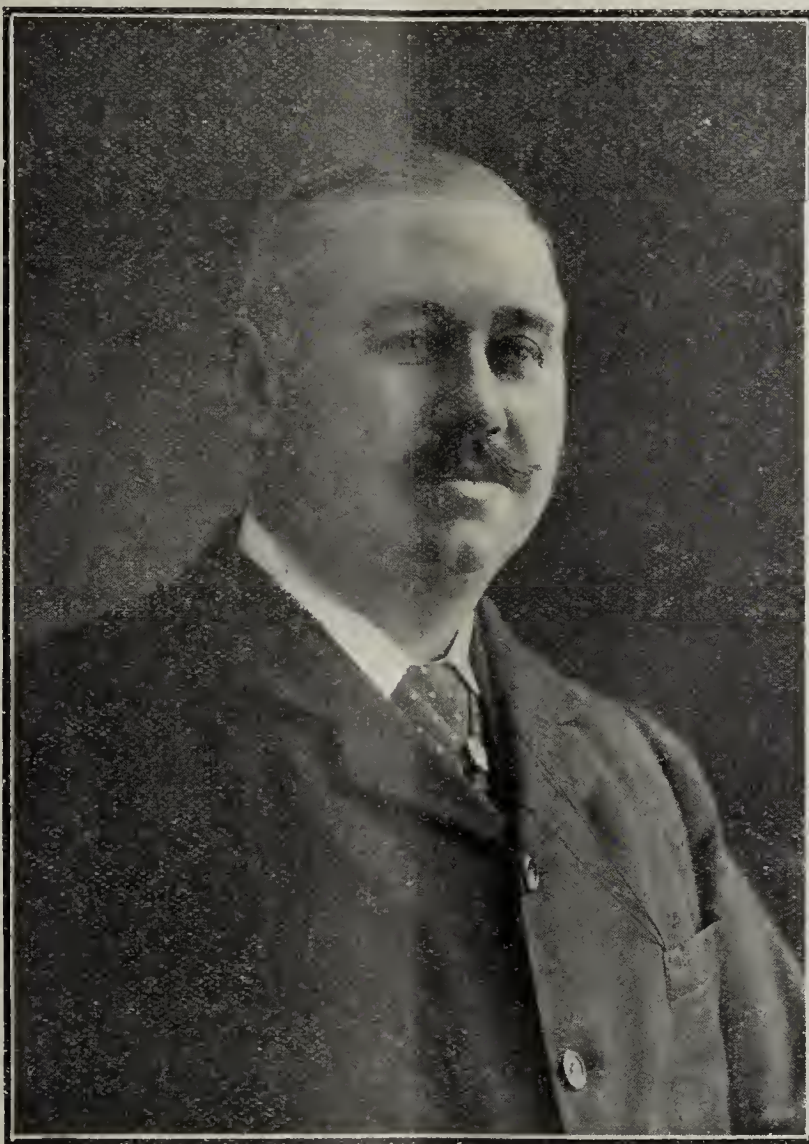
In the year 1882, Messrs. C. Mitchell and Co. amalgamated with Sir W. G. Armstrong and Co. of Elswick, under the style of Sir W. G. Armstrong, Mitchell and Co., Ltd. The name of the firm was again changed in the year 1897, when it was amalgamated with that of Sir Joseph Whitworth and Co., of Manchester. Since that time the firm has been known as Sir W. G. Armstrong, Whitworth and Co., Ltd., Mr. Swan remaining as one of the managing directors, and devoting most of his time to the development of the shipbuilding business in the Walker Shipyard.

When the ocean transport of petroleum became a matter of great importance—almost twenty-five years ago—Col. Swan gave the subject his close attention, and

the result was that in 1885, the tank steamer "Gluckauf" was constructed with this firm from his own designs. To-day, the hundredth oil tanker, built by Sir W. G. Armstrong, Whitworth and Co., stands on the stocks, and throughout the construction of this great number, Col. Swan's name has been inseparably associated.

The construction of ice-breaking steamers also received the very careful attention of the deceased gentleman. In the year 1894, the firm built the ice-breaking and railway ferry steamers, "Saratovskaia Pereprava" and "Saratovski Ledokol" for the Riazan-Ouralsk Railroad Co., for their services on the river

Volga. These vessels were followed by the railway ferry ice-breaker "Baikal," and the ice-breaker "Angara," both of which were built to the order of the Russian Government, to cross Lake Baikal in connection with the Siberian railway system. Both these vessels were constructed at the Walker shipyard, taken to pieces, shipped by steamers to a Russian port, and then conveyed by rail and road to their destination, where they were re-erected and set to work. It was these two vessels that worked so successfully in conveying the troops across Lake Baikal on their way to the seat of the war with Japan. The firm also built the ice-breaking steamers "Sampo" and "Tarmo" for the Finnish Government. When the late Admiral Makaroff was commissioned



by the Tzar of Russia to build a powerful ice-breaker, capable of keeping the Baltic open at all times during the winter, it was Mr. Swan whom he approached with his scheme for the building of the "Ermack."

In December, 1907, the official staff of the Walker shipyard presented Mr. Swan with a solid gold cigarette box as a memento to the completion of 50 years of business life.

Colonel Swan was a member of the Council of the Institution of Naval Architects, a past president of the North-East Coast Institute of Engineers and Shipbuilders, and a member of the Civil Engineers, the Iron and Steel Institute, and the North of England Institute of Mining and Mechanical Engineers. He was a director of Sir W. G. Armstrong, Whitworth and Co., Ltd., the Wallsend Slipway and Engineering Co., Ltd., the Weardale Steel, Coal and Coke Co., Ltd., and the

Cargo Fleet Iron Co., Ltd. He was one of the original members of the old Local Board at Walker, and of the old School Board at Longbenton, and of the Northumberland County Council. He was a J.P. for Newcastle and for the County of Northumberland. He was also recently appointed High Sheriff of Northumberland, and was "sworn in" only on the 3rd of this month.

Colonel Swan was a most munificent benefactor of the Walker Parish Church. He assisted the building of the parish hall and the extending of the churchyard. He completed the work begun by his nephew, the late Mr. C. W. Mitchell, by giving a handsome oak case and panels for the organ, and fitting the church throughout with the electric light. He also put into the church three stained-glass windows in memory of his parents and various members of his family.

BAKU PRODUCTION DURING FEBRUARY.

The total production of crude oil at the Baku oil fields in February (o.s.) amounted to 34,708,588 poods, of which 10,125,177 poods was obtained from the Bebe-Aibat field. Spouters in February yielded 500,000 poods.

The production of the leading firms in February was as under:—

	Poods.
Nobel Bros.	4,782,935
Caspian and Black Sea Society	2,835,032
Mantáscheff and Co.	2,092,622
Caspian Society	1,958,200
Baku Naphtha Co.	1,727,518
Zoubaloff	1,460,000
Aramazd Co.	1,121,500
Russian Naphtha Co.	1,033,850
Russian Petroleum and Liquid Fuel Co., Ltd.	977,500
Moscow-Caucasian Co.	970,500
Bibi-Eybat Petroleum Co., Ltd.	922,500
Baku Russian Petroleum Co., Ltd.	912,025
Schibaieff Petroleum Co., Ltd.	850,179
Pitoeff and Co.	839,200
Nagieff	763,307
Naftalan Co.	661,384
Mirzoeff Bros.	597,900
Neft Co.	566,500
Shikhovo Co.	545,000
European Petroleum Co., Ltd.	535,400

THE SPIES COMPANY'S SPOUTER.

A Grosny correspondent in the *Neftiannoie Diclo*, speaking of the spouter on the Spies Petroleum Co.'s property, gives the following analysis of the oil produced:—

Specific gravity	..	..	..	..	..	0.8696
Quantity of water in suspension	..	..	..	..	..	0.12%
Fractions.			Per cent.			Spec. grav.
Up to 100° C.	..	..	3.05	..	..	0.7011
100 to 150° C.	..	..	10.4	..	..	0.7397
150 to 270° C.	..	..	25.6	..	..	0.8083
Residue	..	..	60.63	..	..	0.9332

The oil from the Spies Co.'s spouter, it will be observed, is of a superior quality to ordinary Grosny crude oil, as it contains more light products. It does not contain any paraffin.

The same correspondent mentions some successful experiments recently made with the object of manufacturing lubricating oils from Grosny crude. The only drawback is that the oils received are of a too heavy gravity. At one refinery a patented process is about to be adopted, which, by the cracking system, would yield lubricating oils of a lighter gravity.

ROUMANIAN PRODUCTION DURING FEBRUARY.

According to statistics compiled by the *Moniteur du Petrole Roumain*, the production of crude oil at the Roumanian oil fields in February amounted to 90,075 tons, against 100,871 tons produced in January. The production of the various fields in February, compared to January, was as under:—

	February. Tons.	January. Tons.
Prahova District—		
Bustenari	36,829	36,936
Campina-Poiana	18,986	26,334
Moreni	26,002	27,126
Baicoi-Tintea	3,392	4,495
Other Fields	1,294	1,972
Total for Prahova	86,503	96,763
Dambovitza District	2,246	2,674
Buzeu District	671	721
Bacau	655	713
Total	90,075	100,871

The production of the leading firms in February, compared to January, was:—

	February. Tons.	January. Tons.
Steaua Romana	26,447	27,364
Regatul Roman Co.	17,297	24,944
Romano-American Co.	9,175	9,543
Bustenari Co.	9,629	9,088
Telega Oil Co.	3,807	3,803
Trajan Co.	3,172	2,790
International Co.	2,752	3,308
Astra Co. (C. M. Pleyte)	3,340	3,166
Colombia Co.	2,092	2,001
Aquila Franco-Romana	1,720	1,893
Nafta Co.	1,550	1,536
Alfa Co.	1,205	1,825
Arnheemsche Petroleum Co.	694	807
Secoleanu Bros.	892	922
Independent Co. (Bloch)	548	702

The total figure for February is not quite complete, there being a few of the smaller firms who have not made their returns, but the production of these firms is so small that the absolute total may safely be taken as not having exceeded 91,000 tons. This means a decline against January by close upon 10,000 tons. The causes of this decline are, firstly, the reduced output of the Campina property of the Regatul Roman Co.; and, secondly, the fact that February is two days shorter than its predecessor. With the exception of Campina, the production at all other fields has been well maintained and in some places even increased.

THE OPERATIONS OF ROUMANIAN REFINERIES DURING FEBRUARY.

The quantity of crude oil treated at the Roumanian refineries during February was 79,263 tons. The output of various products was as under:—

	Tons.
Benzine	12,961
Refined illuminating oil and distillate	22,164
Lubricating oils	6,801
Residuals	35,515
Total	77,441

The deliveries of oils for home consumption during the month and stocks at the end of it were:—

	Deliveries for Home Consumption in February. Tons.	Stocks on Feb 29th. Tons.
Benzine	62	62,533
Refined illuminating oil and distillate	2,793	57,699
Lubricating oils	409	22,465
Residuals	29,008	47,102
Total	32,272	189,799

The output of paraffin scale during February was 45 tons; the deliveries for home consumption, 56 tons; and the stock on February 29th, 82½ tons.

THE GALICIAN CRUDE OIL INDUSTRY DURING 1907.

DETAILS OF PRODUCTION.

According to statistics published in the latest issue of *Naphta*, the total production of crude oil in the Galician oil fields during 1907 amounted to 1,175,974 tons, which establishes a record, and is 50 per cent. larger than in 1906.



IN THE GALICIAN FIELDS.

The progress of the production month by month during 1907 were as follows:—

	Tons.		Tons.
January.. ..	66,412	July.. ..	110,340
February	64,216	August	128,440
March	76,040	September	119,080
April	76,176	October	117,270
May	88,181	November	111,240
June	102,089	December	116,570
Total for the First half-year ..	473,034	Total for the second half-year ..	702,940
Total for the year	1,175,974		

The quantities of crude produced during 1907 by the various fields were as follows:—

	First Half-Year.	Second Half-Year.	Total for 1907.
	Tons.	Tons.	Tons.
East Galicia—			
Boryslaw-Tustanowice ..	391,300	620,290	1,011,590
Schodnica	20,450	19,200	39,650
Urycz	6,950	6,560	13,510
Mraznica	700	790	1,490
Other East Galician Fields	6,300	5,930	12,230
West Galicia—			
Potok	7,330	6,520	13,850
Rogi	4,313	4,720	9,033
Rowne	841	1,140	1,981
Tarnawa-Wielopole-Zagorz	7,550	9,840	17,390
Krosno	14,660	15,300	29,960
Other West Galician Fields	12,640	12,650	25,290
Total	473,034	702,940	1,175,974

It will be observed from the above figures that out of a total of 1,175,974 tons, 1,011,590 tons, or 86 per cent., was obtained from the Boryslaw-Tustanowice field, which field is also responsible for the whole of the great increase against last year's production. The rise of Tustanowice commenced in the middle of the year, but its output was the highest in August, when the celebrated Wilno well was struck.

The relation of the production to the quantities

marketed or consumed and consequent effect on stocks in each field is shewn below (in tons):—

	Stock on 31st Dec. 1906.	Production in 1907.	Deliveries in 1907.	Consumption and Loss.	Stock on 31st Dec., 1907.
East Galicia—					
Boryslaw—					
Tustanowice	345,602	1,011,590	748,090	25,650	601,108
Schodnica	13,833	39,650	36,925	2,350	7,130
Urycz	10,295	13,510	18,891	1,950	2,070
Mraznica	604	1,490	1,716	280	68
Other East Galician Fields	1,062	12,230	10,421	1,130	1,321
West Galicia—					
Potok	3,901	13,850	15,850	560	1,261
Rogi	1,116	91,033	11,095	880	1,504
Rowne	177	1,981	1,108	150	820
Tarnawa-Wielopole-Zagorz...	4,559	17,390	17,649	700	3,219
Krosno	10,643	29,960	26,442	2,390	10,971
Other West Galician Fields	7,745	25,290	23,159	1,500	7,426
Total	399,547	1,175,974	911,646	37,540	636,898

It will be seen from the above table that the stocks of crude oil have during the year increased by 237,358 tons, and this notwithstanding the fact that the refineries increased the quantities of crude oil treated by them by 177,476 tons.

The returns made by the railways shew that during 1907, they transported 942,820 tons of crude oil to the refineries. In addition, 34,842 tons were delivered by cart and pipe line, so that the quantities delivered to the refineries direct amounted to 977,668 tons, which includes 20,000 to 30,000 tons of crude oil used for fuel purposes. In any case the fact is now established that the refineries in Austria-Hungary in the past year were capable of handling close upon 1,000,000 tons of crude oil.

As a result of the increased exports in the concluding



TYPICAL HOUSES AT BORYSLAW.

months of the year, the erection of new refineries, and the increased use of crude oil for fuel purposes, it may be reasonably expected that in the current year the consumption of crude oil for various purposes will amount to about 1,200,000 tons. Should the production remain on the same level as last year, an over-production will be out of the question. This presumption is the more probable, as a set back in the production has already

shewn itself in the latter part of 1907. It is of course possible that later on in the year, when the numerous wells now in drilling will reach the oil strata, there may be a further sudden rise in production, but the refining industry having shewn itself capable of adapting itself with comparative ease to an increased output, no fear of over-production need be entertained. This of course is the view entertained by our contemporary, the correctness of which only the future can prove. Taking this view as a basis, our contemporary concludes that Galician crude oil will soon again become a valuable article, and prices must go up.

The figures of the railway deliveries shew that out of a total of 977,168 tons of crude oil delivered to all refineries, refineries in Galicia received 281,344 tons, or 28.8 per cent.; in the rest of Austria, 422,829 tons, or 42.2 per cent.; Hungarian refineries, 272,995 tons, or 28.4 per cent.; 6,274 tons were exported in crude state. In 1906 the proportions were: Galicia, 33.72 per cent.; rest of Austria, 42.5 per cent.; and Hungary, 23.8 per cent. The relation has thus changed to the disadvantage of the Galician refineries and in favour of the Hungarian refineries. The explanation is that in 1907 the Hungarian refineries began to work also for export, whilst formerly they were confined to the home trade.

In conclusion, we consider it interesting to shew the progress made in the crude oil production in Galicia during the last 12 years by giving the following figures:—

	Tons.		Tons.
1895	214,800	1902	576,000
1896	339,765	1903	713,330
1897	309,626	1904	827,116
1898	323,142	1905	801,796
1899	321,681	1906	760,443
1900	326,334	1907	1,175,974
1901	452,200		

PRODUCTION OF ENGLISH COMPANIES IN RUSSIA.

BAKU RUSSIAN PETROLEUM CO., LTD.—The production for the week ended March 28th was 203,000 poods, or 3,272 tons; and for the week ended April 4th was 194,000 poods, or 3,128 tons.

RUSSIAN PETROLEUM AND LIQUID FUEL CO., LTD.—The production for the week ended March 28th was 217,000 poods, or 3,499 tons; and for the week ended April 4th was 210,000 poods, or 3,336 tons.

SPIES PETROLEUM CO., LTD.—The output for the week ended March 29th was 303,835 poods, or 4,901 tons, of which fountain No. 5 well yielded 185,910 poods, or 2,998 tons. The fountain still continues. The production for the week ended April 5th was 302,745 poods, or 4,883 tons, of which the fountain in No. 5 well, on plot Baskakoff gave 180,460 poods, or 2,910 tons. This fountain still continues to spout, yesterday's production being 25,025 poods, or 403 tons. The total production from this fountain to the 6th inst. was 1,596,230 poods, or 25,745 tons.

THE EUROPEAN PETROLEUM CO., LTD.—The production for the week ended March 29th was 123,360 poods, or 1,989 tons; and for the week ended April 5th was 121,760 poods, or 1,963 tons.

THE BATOUM EXPORT TRADE DURING FEBRUARY.

The kerosene trade of Batoum during February was somewhat more brisk than in the preceding months, which was largely due to the shipment of two large cargoes, aggregating 979,000 poods, to the Far East, which brought the total of the bulk shipments for the month up to 2,226,000 poods. In case oil, things proceeded smoothly, and the shipments rose to 500,000 poods. At the same time the tone of the market and prices continue firm. Lubricating oils were quiet and the volume of the trade was small, not exceeding 555,000 poods. The decline was general in all lubricating oils, only 26,000 poods of lubricating oils in barrels was exported in the whole month.

The following are the figures of the arrivals of oils from Baku, shipments from Batoum in February and stocks at the end of that month:—

	Arrivals from Baku. Poods.	Shipments from Batoum. Poods.	Stocks on 29th Feb. Poods.
Refined Kerosene ..	3,785,000	2,732,000	4,103,000
Kerosene Distillate ..	—	—	102,000
Solar Oil	1,000	—	90,000
Machine Oil	459,000	424,000	1,029,000
Spindle Oil	48,000	45,000	182,000
Cylinder Oil	32,000	6,000	43,000
Vaseline	—	80,000	22,000
Lubricating Oil Distillate ..	—	—	—
Residuals	182,000	182,000	297,000
Other Products	61,000	3,000	10,000
Total	4,568,000	3,472,000	5,876,000

Of the 3,785,000 poods of refined kerosene delivered from Baku in February, 378,000 poods came in tank waggons and the rest was pumped through the pipe line

The quantity of oils delivered from Baku in February was almost identic with that of January (4,557,000 and 4,568,000 poods respectively). The difference only is that in February kerosene shewed an increase in deliveries by 500,000 poods at the expense of other products. The place of the largest recipient of oils, which formerly was held by Nobel, was in February taken up by the Caspian and Black Sea Society, who in February received into their tanks 45 per cent. of the total arrivals. The falling off in shipments to British ports was one of the principal features of the trade in February, in which month only one cargo of 387,000 poods were shipped to the United Kingdom, and the total exports to British ports in January and February were 950,000 poods. The Consolidated Petroleum Co. is this year shewing no interest in shipping oils from Batoum, and only the increased demand for the Far East keeps up trade. Practically all European countries have reduced their imports of Russian oil. French ports, which formerly were receiving considerable quantities of kerosene distillate, are now taking only lubricating oils. The shipments to the principal countries in February, were:—France 227,000 poods, Germany 163,000 poods, Belgium and Holland 640,000 poods, other European countries 117,000 poods. The Mantascheff Co. is making regular shipments of kerosene to Alexandria. In February their tanker "Borjom" took there a mixed cargo of bulk and case oil—in all, 190,000 poods. To Turkey, Balkan States, and other Mediterranean ports, there were shipped in February 435,000 poods, almost exclusively bulk oil. Russian home ports received in February three bulk cargoes, aggregating 323,000 poods.

The London and Thames Haven Oil Wharves, Ltd.

ANOTHER HIGHLY SATISFACTORY YEAR.

The tenth ordinary general meeting of the shareholders of the London and Thames Haven Oil Wharves, Ltd., was held last Wednesday week at the Baltic, St. Mary Axe, E.C.—Mr. Owen Philipps, M.P. (chairman of the company) presiding.

The company's Secretary (Mr. T. Clarkson J. Burgess) having read the notice convening the meeting and the auditors' report,

The Chairman rose to move the adoption of the balance sheet and report of the directors. In doing so he said: This company was incorporated ten years ago to take over an old-established business, and as this is the tenth occasion on which we have met the shareholders, the accounts now submitted to you shew the position of the company's business after practically ten years administration by the present board. I think it may be of interest if I give you a few comparative figures which will enable you more readily to grasp the great developments that have taken place in your business since 1898. I shall refer more particularly to the Thames Haven

making an issue of shares until the conditions became more favourable. Of course, you will understand that it would not have done for us to have run the risk of an unsuccessful appeal, and we therefore made arrangements to issue the balance of our ordinary shares, and got them underwritten. The expenses of the issue have been written off the amount standing to the credit of reserve. We have considered it wise to strengthen the company's position by putting a somewhat larger amount out of the year's profits to reserve. In addition to this, following our usual practice, we have written off depreciation with a liberal hand, and are able to recommend the payment of a dividend on the ordinary shares at the rate of 8 per cent. for the year, which is the same rate as we declared for the previous year. The business of the year under review was, we are pleased to say, fairly satisfactory, the increases in some branches neutralising the shortcomings in others. There is one other question which should be referred to, and that is the matter of debentures, which, as you are aware,



A GLIMPSE OF THE STORAGE TANKS.

property, because that, after all, is our principal asset and where the bulk of the business is done. This property in 1898 consisted of about 12 acres of freehold land. In 1907 your business has so grown that the wharf premises cover about 30 acres of ground. In addition to this, however, there is a large piece of freehold land (upwards of 45 acres) which we are hoping to make use of for a purpose which should be profitable to the company at no very distant date. To continue the comparison, in 1898 we had one deep-water pier, and the tonnage of vessels accommodated at that time was about 50,000 tons per year. In 1908 you have two deep-water piers, and the tonnage of vessels which these piers have to accommodate has risen to close on 250,000 tons per year. The growth of the company's tankage is, perhaps, more significant still; for whereas in 1898 we had tanks having a capacity of 13,000 tons, we now have tanks having a capacity of over 100,000 tons.

In 1906 it was found necessary to undertake a rather larger expenditure than usual on tanks, etc., and the amount of expenditure under that scheme was practically completed at the end of the year under review. It was in view of the lengthy period of time over which these operations were spread that it was decided to deal with the matter of finance in 1906 by loan, and to postpone

become payable on June 30th next. This matter is engaging the careful attention of the board, and we hoped in this connection to be in a position to make an announcement to the shareholders to-day. The directors are considering an offer which they have received relating to their surplus land at Thames Haven, which would have a particular and important bearing upon the question of debentures; but, unfortunately, time has not permitted of the matter progressing to that stage which will admit of my making a definite announcement to-day.

Perhaps some of you may have noticed recently a renewal of the agitation to remove the restrictions now in force relating to the carriage of petroleum spirit in bulk on the River Thames. It has always been the policy of this company—inasmuch as we serve impartially all the different interests in the trade—to hold aloof from all matters which may be the subject of contention between conflicting interests in the trade, and, in regard to this matter of the importation of spirit in bulk, we have hitherto followed our usual policy, and more particularly for the reason that the greater portion of the trade is content with the present regulations. The discontented portion is, I think I may say, represented almost entirely by the Anglo-American Oil Co., who are desirous of bringing their ships carrying spirit in bulk

up the river to their oil depôt at Purfleet, which they may not do at the present time. A lot has been said in many different ways which tends to shew that the American interests claim to be hardly and unfairly used, and it is stated that, could they have their way, the price of petrol would be slightly reduced. I do not want to go into any of the argumentative points, but as chairman of your company—the company which handles every ton of spirit brought into this port, and whose developments have been made under the existing regulations for the benefit of the trade as a whole—it is only right that I should state to you—and I state it without fear of contradiction—that the American interests are under no disadvantage at all over and above any of our other clients. I can but hope that our good friends who represent the American interests will, in the interests of this port and of their own trade, not succeed in their campaign for enabling their huge vessels full of spirit to come through the tortuous ways of the River Thames and into the crowded business portions of the river, because it will only need very little for the authorities to step in and say: “We will not only revert to our old and safe regulations, but we will make others which will be stricter than before.” At any rate, should these matters come to be dealt with by the authorities, we shall continue to endeavour to make for safety, efficiency and economy. It gives me pleasure to be able to congratulate you on another successful year's trading, and to be able to say that the year 1908 has commenced well, and your business is in a thoroughly satisfactory condition. I have much pleasure in moving: “That the report and accounts for the year ended December 31st, 1907, now presented, be adopted, and that a dividend on the ordinary share capital of the company at the rate of 8 per cent. per annum, less income-tax, be, and the same is hereby, declared payable out of the profits of the company for the year ended December 31st, 1907, partly-paid shares *pro rata* on amounts paid up from date of payment, and that the same be paid, less the sum paid in advance of such dividend.

Mr. Allan McCall seconded the motion.

Mr. Leonard said the report appeared to be very satisfactory, and the shareholders had every reason to congratulate themselves upon it. Perhaps the most important question affecting the finances of the company this year was that both series of debentures would be repayable on June 30th, and he ventured to suggest that in any new issue the debentures should be consolidated and made into one series.

The Chairman said that if a new issue of debentures were made it would be in one series, and the rate of interest would be as low as the directors could

conveniently arrange. Replying to further questions, he said that in the event of such issue being underwritten and any shareholders being desirous of taking part in the undertaking the directors would be only too pleased to consider favourably any application he might send in. The company's present tankage capacity at any one time was 100,000 tons. This was used for all purposes, including every sort of oil from every oil-producing country in the world. With regard to the additions made to tanks, buildings, etc., he would point out that there had been a very large expansion in the business, during the last two years particularly.

The motion was carried unanimously, and on the proposition of the Chairman, seconded by Mr. Alfred C. Adams (managing director), Mr. F. H. Simmonds was re-elected a director, and the auditors were also re-appointed.

A vote of thanks to the chairman, directors and staff was then passed, congratulations being offered to the managing director—Mr. Adams—upon his recovery from a serious illness, Mr. Burgess at the same time being complimented upon the very efficient way in which he had carried out the duties of the position in the absence of Mr. Adams.

The Chairman thanked the shareholders for their presence, and the meeting then terminated.

PETROLEUM PRODUCTION IN DUTCH INDIA.

The production of the Mines, Bush and Land Exploitation Co., of Langkat, was in January, 1908, 188,052 units of refined oil. The total production in 1907 amounted to 2,303,126 units, against 2,118,987 units in 1906, and 1,896,077 units in 1905.

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The East Borneo Co.'s output of oil in February amounted to 9,150 tons, against 10,000 tons in January. The output in 1907 was 106,100 tons, against 82,972 tons in 1906.

—★—

The production of refined oil by the Dordtsche Petroleum Co. in February was 164,600 cases, against 172,000 cases in January. The output in 1907 amounted to 2,083,700 cases, against 1,994,450 cases in 1906, and 2,007,310 cases in 1905.

—★—

The output of refined oil by the Panolan Co. in February was 39,149 cases, against 30,199 cases in January. The production in 1907 was 508,383 cases, against 629,232 cases in 1906, and 563,935 cases in 1905.

CLASSIFIED IMPORTS INTO UNITED KINGDOM UP TO APRIL 6th, 1908.

IN GALLONS.

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COUNTRY.	ILLUMINATING.		LUBRICATING.		RESIDUALS.		GAS OIL. (Solar)		BENZINE.		FUEL OIL.		OTHER DESCRIPTIONS.		TOTALS.	
	Since Mar. 23.	From Jan. 1.	Since Mar. 23.	From Jan. 1.	Since Mar. 23.	From Jan. 1.	Since Mar. 23.	From Jan. 1.	Since Mar. 23.	From Jan. 1.	Since Mar. 23.	From Jan. 1.	Since Mar. 23.	From Jan. 1.	Since Mar. 23.	From Jan. 1.
Austria ...	—	—	—	16,000	—	17,180	—	—	—	—	—	—	—	—	—	33,180
Belgium ...	—	—	12,820	205,860	12,000	36,000	—	—	—	40	—	—	—	—	24,820	241,900
Canada ...	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Dutch India ...	—	—	—	—	—	—	—	—	872,960	5,293,470	—	—	—	—	872,960	5,293,470
Germany ...	16,690	382,190	88,230	465,510	—	6,090	—	—	—	—	—	—	2,590	—	104,920	856,380
Holland ...	—	—	—	9,220	—	—	—	—	—	76,840	—	—	2,000	19,260	2,000	105,320
Roumania ...	788,800	3,114,700	—	—	—	—	—	3,083,150	—	966,080	—	—	—	—	788,800	7,163,930
Russia ...	1,787,690	6,085,620	372,800	1,146,260	68,000	68,000	—	—	—	—	—	—	—	—	2,228,490	7,299,799
U.S.A. ...	2,940,700	27,150,570	1,355,420	12,346,490	8,190	609,480	2,645,720	15,756,180	—	349,840	—	1,358,300	62,530	664,250	7,012,560	58,235,110
Other Countries	—	—	440	35,250	40	40	—	—	—	280	—	520	—	160	480	36,250
	5,533,880	36,733,080	1,829,710	14,224,590	88,230	736,790	2,645,720	18,839,330	872,960	6,686,550	—	1,358,800	64,530	686,260	11,035,030	79,265,339

THE APPLICATION OF LIQUID FUEL.

IMPROVEMENTS IN SPRAYING APPARATUS BY SIR J. I. THORNYCROFT.

A patent has recently been granted to Sir John Isaac Thornycroft, Knight, F.R.S., of Church Wharf, Chiswick, for an invention which relates to apparatus for spraying purposes, more particularly for supplying liquid fuel to furnaces such as those of steam generators and the like.

In order that liquid fuel may be utilised successfully, it is necessary to spray it or cause it to be delivered in a state of very fine division into the furnace in which it is to be burnt, and this has hitherto been generally done by intermingling a jet of steam or of air with a small stream of the fuel.

The object of the present invention is to avoid the necessity of using steam, air or other fluid under pressure in the treatment of the liquid, and to attain the proper division of the fuel by forcing the same through a nozzle of special construction which at the same time renders the supply of fuel more easily controllable.

According to the present invention the liquid fuel (hereinafter referred to as oil) is discharged from a suitable casing or body into which it is introduced under pressure in any usual or convenient way through a nozzle orifice, the general configuration of which is

that of a truncated cone, the apex end whereof preferably terminates in a cylindrical portion of appropriate length so that the issuing oil shall be diverted into paths most convenient for its proper consumption. Co-acting with the said orifice is a plug or valve, the general configuration of the extremity of which is likewise that of a truncated cone. This plug or valve member (hereinafter called the plug) is capable of a combined axial and rotary movement which may be normally opposed by a suitable resistance such, for example, as that of a compressive spring, the action whereof is restrained by an adjustable limiting stop.

In order to secure the necessary division of the oil, the co-acting surfaces of the nozzle orifice and plug are not left plain, but are specially formed so that when the latter is moved with respect to the former, an exit passage or passages of varying size is or are provided by which means the oil consumption can be readily controlled or arrested.

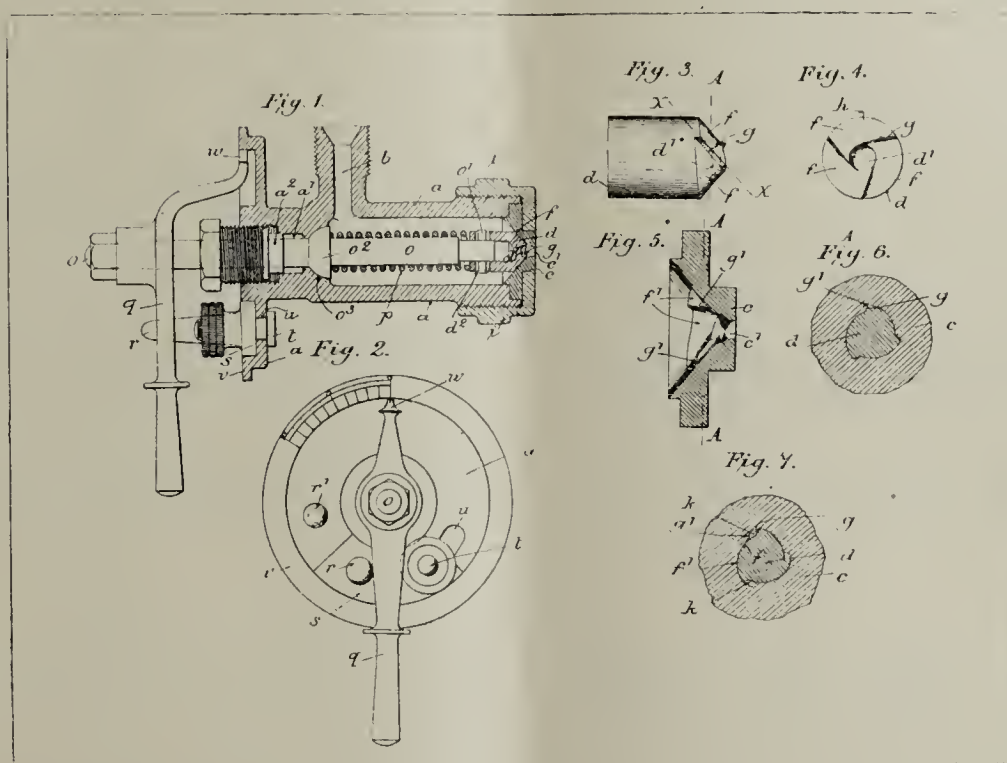
In the accompanying drawings, Fig. 1 shews partly in central section and partly in side elevation, and Fig. 2 in rear end view, one construction of spray-

ing apparatus embodying the present invention and suitable for supplying oil to the furnace of a steam generator. Fig. 3 is a side elevation and Fig. 4 an end view, both to an enlarged scale, of the movable member or plug of the nozzle shewn in Figs. 1 and 3. Fig. 5 shews the nozzle in longitudinal section, Figs. 6 and 7 are cross sections of the plug and nozzle corresponding to the line A. A. of Figs. 3 and 5, the two parts being shewn in different relative positions in the two figures.

a is the casing or body from which the oil fuel, introduced through an inlet pipe *b*, is to be discharged through the nozzle *c*. *d* is the adjustable plug of the nozzle, having its front end portion of truncated conical shape, and its rear or base end portion of cylindrical shape, as shewn. The conical end of the plug is formed

with three helical surfaces *f*, each terminating in a step *g* that is inclined to an imaginary line *h* connecting corresponding diameters at the base and apex end of the truncated cone, and lying in an imaginary plane containing the axis of the plug. Each helical surface *f* and step *g* can conveniently be formed by mounting the plug in a holder by which it can be rotated in a step by

step manner and simultaneously advanced to a small extent and causing a slotting tool to pass endways over and take a cut from the conical end of the plug in the required angular direction of the step after each rotary and forward movement, so that the successive strokes of the tool, the first of which commences at the line *x x*, cut deeper and deeper into the surface of the conical extremity of the plug thereby forming the helical surface *f* and finally finishing when a step *g* of the required width of face is formed. In this way a portion of metal of gradually increasing thickness from the line *x x* to the step *g* in advance is removed from the conical end of the plug. The plug is then moved backward in an axial direction and the operation repeated for forming the next helical surface *f* and step *g*, and so on for each helical surface and step. As the cutting is effected in a direction inclined to the said imaginary line *h*, each helical surface *f* will, of course, be slightly concave as seen in a longitudinal section of the cone containing the axis of the plug. The inner surface of the nozzle *c* is similarly formed with corresponding helical surfaces *f'* and steps *g'* so that the surfaces and steps on the one



part closely fit those on the other. The forward end of the plug *d* is preferably formed with a central cavity *d*¹, and the nozzle *c* is formed with a centrally arranged exit aperture *c*¹ of circular section. *i* is a cap or ring screwed on to the casing *a* so as to hold the nozzle *c* in place therein.

The arrangement is such that as the plug *d* is partially rotated in the nozzle *c*, the stepped portions *g* of the plug and *g*¹ of the nozzle, which are normally in contact, as shewn in Fig. 6, when the oil supply is arrested, will recede one from the other and form longitudinally extending exit passages *k*, as shewn in Fig. 7, through which the oil will flow in an inclined or tangential direction from the casing *a* of the apparatus to the exit aperture *c*¹, where it will impinge at an angle against the wall of such aperture so that a rotary motion will be imparted to it, and will thence escape over the outer edge of the aperture in the form of a thin hollow body, and finally break up into a finely divided state or spray.

It will be understood that by reason of the helical formation of the surfaces *f*, *f*¹, the plug *d* whilst being partly rotated, is simultaneously retracted and that the size of the exit passages *k* will vary with the extent of such rotation. In the example illustrated the maximum effective rotation is confined to an angle of 120°.

The number of steps *g*, *g*¹ and corresponding helical surfaces *f*, *f*¹ on the plug *d* and nozzle *c* respectively and consequently the number of oil passages *k*, can be varied to suit requirement. There may be only one or two of each, or more than three.

Rotary movement of the plug *d* can be effected by securing the same to a rotary spindle *o*, conveniently by a pin *o*¹ fixed to the spindle and extending through a slot *d*² in the plug, so that the plug can move in an endways direction whilst the spindle is prevented from moving

endways. In the example, the plug *d* is carried by the forward end of the spindle upon which it can slide to a small extent. The spindle *o* extends through a stuffing box *a*¹ and gland *a*² to the exterior of the casing *a*, and may may be formed with a collar *o*² having a part spherical surface at *o*³ arranged to bear against a similar surface in the casing *a*. *p* is a coiled spring arranged between the plug *d* and the collar *o*² on the spindle, so that it tends to force the plug *d* forward into the nozzle *c*. The outer end of the spindle *o* is provided with a hand lever *q* adapted to bear against an adjustable stop *v*. This stop is shewn as a pin carried by a plate *s* that is capable of being adjusted on the casing *a* and of being fixed thereto by a bolt *t* extending through a segmental slot *u* in a flange *v* on the casing. The hand lever *q* is formed with a finger or indicator *w* arranged to work in proximity to a scale *x* on the flange *v*, so that the conditions of oil supply prevailing at any time can be again restored after having been once disturbed.

The spindle *o* and plug *d* can, when required, be rotated by the hand lever *q* and caused to move backward against the action of the spring *p* to open the exit passages *k* to the required amount, the lever spindle and plug being held in place by the stop *v* which is adjusted to bear against the lever, and prevent its return. The lever is, however, free to be turned to a further extent, limited by a stop *v*¹ in order to temporarily increase the size of the discharge passages *k* and so assist in removing any matter which may have become lodged therein or impede the flow of the oil therethrough, in which case, as soon as the hand lever is released, the spring *p* will cause the plug *d* to automatically return to the proper operative position.

By the construction described it will be seen that upon removal of the screw cap or ring *i*, the spindle *o*, plug *d*, and nozzle *c* can be easily put in place or removed.

PETROLEUM IMPORTS INTO THE UNITED KINGDOM DURING MARCH.

THE SHIPMENTS INTO VARIOUS PORTS.

The imports of petroleum into the various ports of the United Kingdom during March amounted to 23,150,070 gallons -- a figure below that of either January or February. The exact figures of the imports will be found in the following table:—

PORT.	Lubricating.	Illuminating.	Residuals.	Benzine.	Other Products	Fuel.	Gas.
Aberdeen ...	—	2,400	—	—	—	—	—
Belfast ...	750	387,710	—	—	—	—	—
Bristol ...	239,940	1,696,100	4,650	—	6,000	—	—
Cardiff ...	5,540	364,500	—	—	—	—	—
Dublin ...	—	11,000	—	—	—	—	—
Glasgow ...	517,820	—	—	—	69,500	—	—
Gloucester ...	130	—	—	—	—	—	—
Goole ...	600	—	—	—	230	—	—
Grangemouth ...	11,520	25,240	—	—	480	—	—
Grimsby ...	5,490	—	—	—	—	—	—
Hartlepool (W.) ...	870	—	—	—	—	—	—
Harwich ...	1,110	—	—	—	—	—	—
Hull ...	250,230	705,140	—	19,000	4,400	—	252,600
Leith ...	43,770	14,780	—	—	—	—	—
Lerwick ...	460	—	—	—	—	—	—
Liverpool ...	996,670	891,300	56,070	37,400	17,410	—	1,814,320
London ...	1,228,590	3,264,360	40	1,556,380	20,000	1,358,380	3,063,840
Manchester ...	848,760	788,800	—	—	25,860	—	760,000
Middlesboro' ...	2,210	—	—	15,600	—	—	—
Newcastle ...	98,870	—	—	—	15,950	—	—
Newport ...	2,910	—	—	—	—	—	—
Plymouth ...	540	—	582,290	—	—	—	—
Southampton ...	28,820	—	—	—	—	—	—
Sunderland ...	1,031,770	—	—	—	—	—	—
Swansea ...	960	—	—	—	—	—	—
Totals ...	5,318,330	8,151,330	643,050	1,628,380	159,840	1,358,380	5,890,760

NOTES FROM ALL QUARTERS.

RUSSIA.

Baku Production.—The production of crude oil at the Baku oil fields in the first 15 days of March amounted to 16,820,605 poods, to which the Bebe-Aibat field contributed 4,826,534 poods. There were no spouters during this period.

Reduced Rates.—The Tariff Committee of the Russian Railways has granted to Messrs. V. Ragosine and Co., petroleum refiners, a reduced rate for the transport of oil from Tchekbakovo Station, where their works are, to Moscow.

To Prevent Exorbitant Oil Prices.—It is reported from Sviazsk that the local Zemstvo at a special meeting resolved to petition the Ministry of Industry and Commerce to regulate the price of illuminating oil in view of its excessive rise in the province of Kazan.

Opening of Navigation Delayed.—A report from Astrakhan, dated March 28th, shews that the opening of navigation has been delayed by continued frosts. The ice on the Volga and out at sea is still firm, being kept up by the very cold nights, although the days are fairly warm.

To Facilitate Transport.—The Tariff Committee of Russian Railways has granted the request of Mr. Ivanoff, owner of petroleum and ozokerite deposits on the island of Tchelen, for a reduced rate for the transport of the ozokerite produced on his property, which would enable it to be marketed in the interior of Russia.

The South Russian Petroleum Company.—It is reported from the Caucasus that a company has been formed called the South Russian Petroleum Co., with the object of prospecting for and producing petroleum on the estate of Prince Tchelokaef in Kakhetia on the Caucasus. The company includes English capitalists, with Lord Armstrong at their head.

Liquid Fuel Consumers' Conference.—A conference of consumers of liquid fuel has been called for April 13th at the St. Petersburg Exchange to consider measures of combating the effects of high prices of liquid fuel on certain industries, more especially the Volga shipping industry. The conference is called by the Council of Industrial Conferences at the instance of the Minister of Industry and Commerce.

Batoum Oil Arrivals.—A report from Batoum, dated March 22nd, records increased arrivals of kerosene from Baku for the account of the Rothschild Co. Messrs. Nobel Bros., on the other hand, have slackened their deliveries from Baku. Increased deliveries of oil has also been accepted by Siderides, whose case factories are working uninterruptedly to their full capacity. Exports, on the other hand, were weak in all directions. A notable shipment is that of 24,000 poods of residuals for Liverpool.

AMERICA.

The Water Trouble in California.—In the Santa Maria field, the trouble with water still continues, and latest advices report that recent efforts made have only been partially successful.

Railroad Purchases Oil Lands.—The Santa Fé railroad had just completed the purchase of 1,200 acres of oil lands in the Midway field, upon which property there are at present 25 producing wells.

Important Acquisition of Land.—It is reported that the Ohio Oil Co. has recently acquired the interests of the Minnetonka Oil Co., which takes over 8,000 acres of producing oil lands, and 195 producing wells in the heart of the Illinois oil fields.

Canadian Crude Oil Prices Advance.—The outlook in the Canadian fields has lately been still further improved by a rise in the crude oil market consequent upon increasing demand. At the end of last month, the price of crude oil in the Tilbury fields was advanced from \$1.34 to \$1.44 cents per barrel.

Railroads and Liquid Fuel.—The railroads using liquid fuel upon their locomotives in California have, it is stated, during the past five years consumed more than 40,000,000 barrels of Californian crude. This, a correspondent in the *Oil, Paint and Drug Reporter* points out, represents a clean saving on fuel alone of \$32,000,000 during that period.

Heywood Oil Company's Success.—The Jennings field is lately doing great things in the way of production. A well was drilled a few weeks ago for the Heywood Oil Co. of Beaumont, and came in with an initial production of 3,000 barrels daily. It has now settled down to 2,000 barrels daily. This latest well is situated in the south-western portion of the field.

A Good Canadian Well.—One of the finest producing wells in the Tilbury field has recently been brought in by the Burnard-Argue Stearns Syndicate. It was drilled to a depth of 1,445 feet and then gave every appearance of being a dry hole. It was given a powerful shot, and immediately started flowing. The latest report is that the well is doing at least 200 barrels daily.

Spindle Top Again Comes to the Front.—There has lately been a number of very good completions in the old field of Spindle Top. The J. M. Guffey Petroleum Co. have brought in a well upon the McFaddin lease which is said to be good for 500 barrels daily, while on the same lease, other parties have completed a test said to be good for 300 barrels daily. Additional developments in the ancient field have resulted in a producer being brought in good for at least 300 barrels daily, and it is believed that this flow will improve later.

ROUMANIA.

The Alpha Company has increased its production by the deepening of its well No. 7 at Tintea, which is now yielding 20 tons daily. The oil now obtained from this well is of a heavier gravity than usual, and contains paraffin scale.

The Vega Company's New Refinery.—The new installation of the Vega refinery, destined for the manufacture of lubricating oils, will be completed toward the end of this month, and will commence regular working on the 1st of July.

Promising Tintea.—Tintea is now attracting the attention of most of the leading petroleum firms. Among the new boreholes recently started there are four wells by the Steaua Romana, three by the Alpha Co., and one by the Hollandsch-Rumeensche Co.

Steaua Romana Debentures.—On the 2nd of April subscription was opened in Berlin and Frankfurt for the third issue of debentures of the Steaua Romana of a nominal value of 3,997,500 francs, bearing 5 per cent. interest. The price of issue is 100½ per cent.

Messrs. Carre-Wenger and Company.—The firm of Messrs. Carre-Wenger and Co. have commenced drilling two prospecting wells at Vulcanesti. The same firm has recently completed successfully its well No. 2 at Bustenari. The boring work is under the direction of Mr. Didier.

Activity around Bustenari.—The production of the Roumanian oil fields has lately kept stationary. Drilling work is proceeding there very actively both for the purpose of exploitation and exploration. Particularly great boring activity is displayed in localities round Bustenari, and should this prove successful, large tracts of petroliferous lands will be opened up for exploitation.

To Annul an Agreement.—Messrs. Secleanu Bros. have applied to the Roumanian Courts for the annulment of their agreement with Mr. L. Michel of Paris. By that agreement Messrs. Secleanu sold to Mr. Michel their Bustenari property for 1,800,000 francs payable in monthly instalments of 50,000 francs each, spread over three years. The annulment is now demanded on the ground that Mr. Michel has not paid the instalments when they became due. The 300,000 francs already paid on account will be forfeited to Messrs. Secleanu.

Residual Contracts.—On April 1st the Roumanian War Ministry gave out contracts for the supply of 8,100 tons of residuals for various military institutions, and 1,300 tons for the Duesti Powder Works. The prices per ton offered by the various firms were for the 8,100 tons: Steaua Romana, 46.75 francs; Aurora Co., 47.85 francs; Credit Petrolifer, 46.90 francs; Aquila Franco-Romana, 47.95 francs; Loewenbach and Co., 47.10 francs. The tender of the Steaua-Romana was accepted. For the 1,300 tons the prices offered were:—Steaua Romana, 47.90 francs; Aurora, 48.45 francs; Credit Petrolifer, 48.50 francs; Aquila Franco-Romana, 48.10 francs; Loewenbach and Co., 47.45. The last-mentioned price was accepted. All prices included delivery.

LATEST QUOTATIONS OF PETROLEUM SHARES.

ENGLISH COMPANIES.

This list is restricted to companies who have paid dividends or who are producers.

Company.	Capital Paid Up.	Value of Shares.	Latest Prices.
Assam Oil	£205,000	£1	1/2-5/8
Baku Russian Petroleum ..	£750,000 Ord.	£1	9d.-1/3
..	£650,000 5 1/2% Pref.	£1	2/3-3/3
Bibi-Eybat Petroleum Co. ..	..	..	7/0-8/0
Californian Oilfields ..	£385,000 Ord.	£1	5 1/2-5 3/4
Commonwealth Oil Co. Pref	18/- paid up(Prem.)	..	7/8-1
..	Def.. £1 fully paid	..	1-1 1/4
European Petroleum.. ..	£550,000 Pref.	£1	1/0-2/0
..	£550,000 Ord.	£1	0/6-1/6
..	£376,000 Deb.	£100	70-74
Russian Pet. & Liquid Fuel ..	£500,000 6 1/2% Pref.	£1	3/0-4/0
..	£600,000 Ord.	£1	2/6-3/6
Schibaieff Petroleum ..	£575,000 6% Pref.	£5	1-1 1/4
..	£575,000 Ord.	£1	2/6-3/6
Shell Transport & Trading ..	£2,000,000	£1	45/0-46/0
..	£1,000,000 Pref.	£10	10 1/2-10 3/4
Spies Petroleum Company ..	£312,500	10s.	9/0-10/0

RUSSIAN COMPANIES.

Company	Nom. Value in Roubles.	Quotations on April. 6th.	
		Lowest Roubles.	Highest Roubles.
Baku Naphtha Co.	100	503	505
Balakhany Naphtha Co. ..	250	—	—
Caspian Society	1,000	4,150	4,175
Mazout Co.	250	—	—
Melikoff, A. C.	250	—	—
Mirzoeff Bros.	250	—	—
Naftalan Co.	250	—	—
Naphtha Co. "Kavkas" ..	250	—	—
Naphtha Trading Co., A. I. Manta-	..	..	..
cheff & Co.	250	153	155
Neft Co.	250	—	—
Nobel Bros.	5,000	11,150	11,250
..	250	—	—
Rops and Co. V... ..	250	—	—
Russian Naphtha Co. ..	250	—	—
Society Mazout	250	—	—
Ter-Akopoff Co.	250	—	—
Tumaieff & Co., J. G. ..	250	—	—
Volga-Caspian Naphtha and Trading Co	250	—	—
.. .. (Second Issue)	250	—	—

SCOTCH COMPANIES

Supplied by Messrs. MACLEAN AND HENDERSON, STIRLING.

Company.	Capital Paid Up.	Value of Share.	Latest Prices.
Broxburn Oil Co., Ltd., Ord. 17/- pd	£235,000	£1	£2 4s. od.
Do. 6% Cum. Pref. ..	£100,000	£10	£12 15s. od.
Burmah Oil, Ord.	£1,100,000	£1	£3 19s. 3d.
Do. Pref.	£250,000	£1	£1 6s. 9d.
Dalmeny Oil Co., Ord. (7 paid) ..	£37,800	£8 10s.	£5 10s. od.
Do. 5% Pref.	£18,900	£7	£4 13s. od.
Oakbank Oil Co., Ltd., Ord.	£170,000	£1	£1 9s. 3d.
.. (17s. paid)	..	..	..
Pumpherstons Min. Oil Co., Ltd., Ord.	£110,500	17s.	£12 10s. od.
.. (17s. paid)	..	..	..
Do. 6% Cum. Pref.	£100,000	£10	£13 os. od.
Tarbrax Oil Co., Ltd. Ord. (£1 pd.)	£38,350	£1	£2 18s. 6d.
Do. 6% Cum. Pref.	£35,000	£1	£1 3s. od.
Young's Paraffin Co., Ltd., Ord. ..	£452,808	£4	£3 13s. od.
Do. "B" Deb...	£150,000	£100	£170 os. od.

DUTCH COMPANIES.

Company.	Latest Quotations (per cent.)	Florins
Arnhemsche Petroleum Mij.	36 1/2	1,000
Aurora .. (Deb. 5%)	82 1/2	—
Campina Poiana Mij.	—	—
Dordtsche Petroleum Mij. (Pref.) ..	134	50
.. (Deb. 4 1/2%)	101	1,000
Gaboes	2 1/16	—
Holl. Rumeensche Petroleum Mij. ..	13	1,000
Int. Rum. Pet. Mij.	33	500
Java Petroleum Mij. (Ord.)	—	1,000
.. (Pref.)	18	—
Koninklyke Nederl. Pet. Mij. Shares ..	280	250-1,000
.. Share certificates	277 1/4	1,000
Mœara Enim Petroleum Mij.	140 1/2	100
.. 1-1,000 Oblig. 5	—	250-1,000
"Moesi Ilir" Petroleum Mij.	—	—
Nederl.-Rumeensche Petroleum Mij. ..	2 5/8	—
Nieuwe Ned. Petroleum Mij. And. ..	—	1,000
Oliebronnen in Hannover Mij.	50	—
.. (Deb. 5 %)	90	—
Panolan Maatschappij Cert.	—	—
Perlak Petrol. Mij. (6% cum. pr. A.) ..	112 3/4	1,000
.. (Common)	—	—
Sumatra-Palembang Petroleum Mij ..	92 1/4	500
Tarakan Petrol Mij.	40	—
Zuid Perlak Petrol. Mij. (Pref.) ..	86	—

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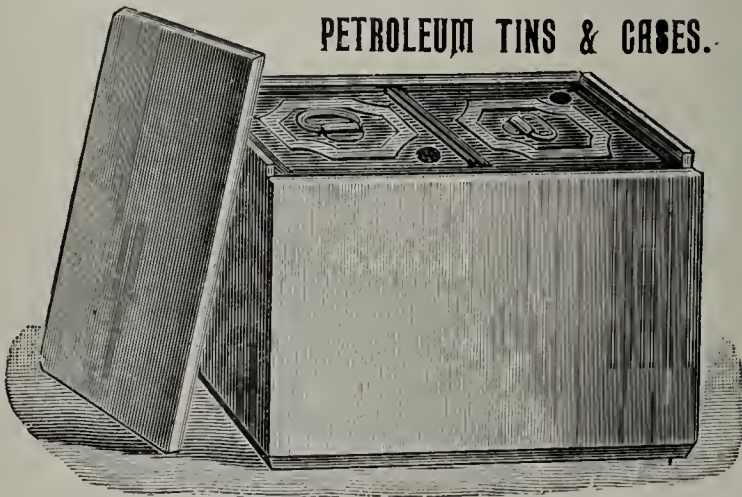
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THE PETROLEUM REVIEW,

45, St. Mary Axe, LONDON, E.C.

American Office: 150, Nassau Street, New York.

SATURDAY, APRIL 11, 1908.

THREE MONTHS' OIL TRADE.

THE statistics dealing with the importation of petro-
leum products into the United Kingdom for the
first quarter of this year shew a decidedly healthy tone,
and they approximately amount to 78,000,000 gallons,
as compared with 70,000,000 gallons for the correspond-
ing period of last year and 72,000,000 gallons for the
first three months of 1906. The totals are made

up for the first quarters of the past three years as under (in gallons):—

	1908.	1907.	1906.
Illuminating oil ..	36,000,000	33,000,000	31,000,000
Lubricating oil ..	14,000,000	13,000,000	15,000,000
Gas oil ..	18,000,000	15,000,000	13,000,000
Benzine ..	6,000,000	7,000,000	7,000,000
Other oils ..	4,000,000	2,000,000	6,000,000

It will be observed that the increase in the aggregate proportion for the first quarter of this year has been very considerable, and consequently we have conclusive evidence that the frequently heard statement that the oil trade of this country is a waning quantity is nothing more than idle talk which cannot be substantiated by fact. The position of our import trade is all the more gratifying when we recollect the various adverse circumstances which to-day prevent the forced import of large quantities of oil for the purposes of stock. The heavy freight rates which have ruled for the past twelve months shew little or no signs of abating, and it is only reasonable to suggest that these have been instrumental in preventing the importation of larger quantities of petroleum products into the United Kingdom during the first quarter of this year.

It is specially interesting to dive a little into the various statistics relating to the different classes of oil. Taking first the trade in illuminating oil, we see that, though not progressing as many would wish to see, oil still plays an important part in the lighting of the homes of the populace. That there may be a falling off in this respect is almost a certainty, but the popularity of the internal combustion engines running on kerosene has more than made good whatever diminution there may have been registered in the use of oil for illuminating purposes. But those engaged in the importation and distribution of illuminating oil have no reason to rest contentedly upon their oars. If we turn back a little, we plainly see how the trade in kerosene has decreased during recent years, though there is now evidence that this decline has permanently stopped. For instance, during the first three months of 1904, the United Kingdom imported no less than 62,000 gallons of illuminating oil, while for the corresponding periods of the two years previously, the figures in both cases were more than 10,000,000 gallons in excess of what they have been during the last three years. America more than holds her own against all other producing countries in the matter of our supply of kerosene, and her total of 27,000,000 gallons in this direction is in excess of what it has been for the first three months of either 1906 or 1907. Russia, on the other hand, after the almost total cessation of exports during the troublous times in the Caucasus eighteen months ago, has made but little headway in making good her declining trade with the United Kingdom, and for the past three months Russia has exported to this country less illuminating oil than she has done for several years. But Russia's loss has been Roumania's gain, and her exports of kerosene to this country for the past three months have been considerably greater than ever before, and quite double what they were for the corresponding months of the preceding two years. In fact, Roumanian

oil upon the English market has certainly come to stay, now ranking as an important factor.

Turning to lubricating oil imports, matters remain thereabouts as they have been for the past few years, each producing country providing us with a proportionate quantity corresponding to that of several years previously.

In regard to the imports of benzine, we here see what promises in time to be a very significant trend of events. America is fast losing her ground as supplying England with the bulk of its motor spirit. We have not to go back far to remember the time when, in this respect, America enjoyed somewhat of a monopoly, but times have changed. The demand in America for the lighter products of petroleum has during recent years grown considerably—until to-day, it is indeed difficult to export petroleum spirit at all. Do not let us be misunderstood. There is no dearth of motor spirit, and it is extremely unlikely there ever will be. What, however, has happened, is that the venue of supply has undergone a great change. Three years ago, America exported to this country almost double the quantity of benzine as did the Dutch Indies; but to-day, America's proportion is bordering upon the infinitesimal. Progressive Roumania is here coming very rapidly to the front, and for the first three months of this year, we have received from that country almost three times the quantity of benzine as we have from America. France is Roumania's largest customer for benzine to-day, but, month by month, the proportion is lessening in favour of England.

What the future will be, can be predicted with almost absolute safety. Roumania is our nearest petroleum producing country which is now cultivating a large export trade, and practically the only country in Europe which is capable of exporting benzine in large, continuous and ever-increasing quantities. Even the Roumanian Government sees their country's chance in this direction, and to-day they are doing their utmost to bring about all those improvements which go to lay the basis of a substantial export. Remarkable activity is now being witnessed in that country in the extension of the old refineries and the erection of new ones, and with the vast improvements which are about to be made at the export port of Constantza, combined with the general desire of all engaged in the Roumanian industry to push operations in every direction as quickly as possible, it is safe to assume that, in the near future, England's trade with Roumania will shew a substantial increase.

In regard to the other various petroleum imports into this country, we find that gas oil continues its firm hold upon the gas-making industry, and inasmuch as the figures of the imports for the first quarter of this year shew a considerable advance over those for the first three months of either 1907 or 1906, it seems that the progress of the gas-lighting industry and that of this special branch of our import trade are bound to run hand in hand.

As we have said, the figures of our petroleum imports for the first quarter of this year are very satisfactory, and display not only a healthy tone, but suggest that progress, though very slow, is really being made.

Mr. John D. Archbold upon the Petroleum Trade of America.

A POINTED ARTICLE.

Mr. John D. Archbold, vice-president of the Standard Oil Co., contributes a most interesting article on "Petroleum" to the columns of the *New York Independent*, which should receive the careful attention of all unbiased and thoughtful readers. As is well known, Mr. Archbold has been continuously engaged in the petroleum industry, either as producer, refiner and transporter, since 1864, and is therefore familiar with every detail of the business.

He points out the marvellous growth of the American oil industry, which has expanded from 2,000 barrels production in 1859 to over 123,000,000 barrels in 1906. During these 47 years the total production of the United States amounted to 1,637,000,000 barrels. The exports alone have added \$2,000,000,000 to the wealth of this country. To-day it is bringing from foreign lands \$10,000 per hour, 24 hours to the day and 365 days to the year.

The most salient portions of Mr. Archbold's contribution are as under:—Petroleum exports command well-earned attention. They are \$100,000,000 per annum, and have brought back from abroad the astonishing total of 2,000 millions in less than 50 years. Yet these imposing figures tell only a part of the story. From the inception of the industry petroleum has been exported, the surplus output finding a foreign market. But of late a new impetus has been given by the introduction abroad of American methods of distribution. American methods no longer stop at the ship's side in a home port. They prevail until the oil reaches the consumer's lamp in every quarter of the globe. And the profits of transportation and marketing come back to America as a return on the American capital employed. Crude mined in Kansas is delivered by pipe to refineries at the Atlantic seaboard. Its products are carried in bulk to receiving stations in all parts of the world, whence they are distributed, still in bulk, by barge, car and waggon until the consumers in England, Germany, China, Africa, India, Australia and Japan pay American sellers for these most typical American goods. The ocean steamers, foreign barges, cars and waggons, with all the tankage and other accessories for many thousand stations represent great investments of American capital, and the profits coming back from every quarter are steadily adding to our nation's wealth. Although the government's figures shew an average income from petroleum exports of \$10,000 per hour, they do not include these returns from abroad. Our petroleum business is no longer limited to America. American in spirit, and American in ownership, it is world-wide in extent, and its value to the United States deserves consideration before it is destroyed.

Again, the critics make a poor shift in their efforts to shew excessive profits. That the American petroleum industry is profitable has never been denied. But profits in an industry should correspond with the risks,

and the hazards of oil are even greater than those of other mining ventures. Luck alone creates many producing fields, and when found their life and quality cannot be anticipated. What seems a satisfactory territory to-day may soon be valueless. Pithole, in 1865, was the third largest postoffice in Pennsylvania; but before its streets could be paved production had past, and the city's site is now a wilderness.

For example, because it has not increased its capital the critics would have us assume that the Standard Oil Co. has not increased its assets, and to speak of large earnings without conceding a right to them because of large investments is quite in keeping with forever harking back to the venerable South Improvement bugaboo—that abortive infant corporation, still-born thirty-five years ago, its stock never issued nor even paid for.

A recent review from the desk of the United States Commissioner of Corporations shews that the investments by the Standard had increased from \$55,000,000 to \$121,000,000 between 1882 and 1892. His words are "more than doubled," his figures shew 2 1-5 times. Assuming a corresponding growth for the succeeding fifteen years, the investment of 1907 becomes \$400,000,000. Those familiar with the expansion of the industry will not think the figures excessive. Existing pipe lines have been enlarged and new ones built to distant fields, enormous refineries erected at home and abroad, a hundred tank steamers and sailing ships provided to carry American products to many thousand distributing stations in every quarter of the globe, requiring tanks, barges, cars, waggons, not to mention the funds to maintain current stocks and distribute goods. In a second paper, Commissioner Smith publishes a table shewing, among other features, the profits of the Standard. One column is headed "Percentage of net earnings based on net assets," and the earnings "average to 1896, 15.3 per cent." The column is not continued, but the basis makes its completion easy, and we find the total earnings on the net assets for 1905, 16½ per cent.; and for 1906, assuming as large returns as for 1905, 15.6 per cent., while from his earlier calculation the Commissioner would make the figure for 1906 only 14¼ per cent. But what are the facts? Men, not yet old, recall a steady progress in illumination, from sputtering tallow dips and dangerous fluid lamps to the safe and satisfying glow of petroleum. Forty years ago the great majority in this and other lands were without artificial light. Petroleum has ameliorated American home life and is fast extending civilising influence throughout the world.

To distribute American petroleum is the mission of the Standard Oil Co., and the industry's matchless growth is its enviable reward. Pipe lines, tank cars, bulk ships and tank stations—all developed and nearly all originated by it—have combined to put a peculiarly hazardous industry upon a safer basis.

As its share in this gigantic commercial adventure, the Standard employs 8,000 miles of trunk pipe lines with 75,000 miles of feeders from wells; storage tanks for crude, holding 82,000,000 barrels; 10,000 tank cars in America and 2,000 abroad; 60 bulk steamers for ocean traffic and 12 for foreign coasting trade, with 150 steamers and barges at home; 3,000 tank stations in America and 5,000 elsewhere; representing an investment of over \$600,000,000 and giving employment to 65,000 men.

The standard is a natural evolution to meet the demands of the petroleum industry because of its unstable foundation. Its genius has been an abiding faith in American oil. As an organisation its success is due to its solidarity; officers and men work together in mutual confidence for a common end, knowing that honest effort will have prompt recognition, and that when faithful service can no longer be rendered an annuity insures provision for declining years. As a business, its success is due to its commercial integrity. It has striven consistently to make its volume of trade large through the merit and cheapness of its products. Millions of satisfied customers in every quarter of the globe will bear witness that it has kept its word.

BAKU STOCKS OF OIL.

The following were the stocks of crude oil and various petroleum products in the Baku district on the 1st of February, 1908 (o.s.):—

					Poods.
Gasoline and Benzine	..	..	..	..	191,653
Illuminating Oil	..	..	..	..	9,732,985
Solar Oil	..	..	..	..	1,790,565
Lubricating Oil	..	..	..	..	2,446,606
Residuals	..	..	..	..	48,700,402
Lubricating Oil Residuals	..	..	..	..	832,707
Goodron, Sabonaphtha, etc.	..	..	..	..	44,945
Crude Oil at the Refineries	..	..	..	..	19,546,079
" " " Wells	..	..	..	..	8,319,559
Total	..	..	..	..	91,605,503

ROUMANIAN PETROLEUM EXPORTS DURING FEBRUARY.

The exports of petroleum products from Roumania to various countries in February were as under :—

Destination	Crude, gas oil, residuals, etc.	Illuminating and Distillate.	Benzine.	Total.
	Tons.	Tons.	Tons.	Tons.
France ..	159	5,178	5,881	11,218
England ..	—	3,025	—	3,025
Germany ..	10	572	2,299	2,881
Turkey ..	81	1,676	—	1,757
Austria-Hungary ..	562	—	—	562
Italy ..	42	—	275	317
Holland ..	—	—	84	84
Bulgaria ..	36	34	5	75
Egypt ..	18	—	—	18
Other Countries ..	1	1	2	4
Total ..	909	10,486	8,546	19,941

The distribution of the exports over the different routes in February was as follows: - Constantza, 16,037 tons; Giurgiu, 1,845 tons; Predeal, 1,061 tons; Burdujeni, 501 tons; Varciorova, 330 tons; Cernavoda, 81 tons; and R. Vadului, 84 tons.

PETROLEUM AT COMMODORO RIVADAVIA.

With reference to the recent note in our journal respecting petroleum at Comodoro Rivadavia, H.M. Consul at Buenos Ayres (Mr. A. C. Ross, C.B.) has forwarded an extract from *La Nacion* describing the work that has already been carried out at the well. The exact position of the borehole is given, as well as the character and thickness of the various strata that have been pierced. The extract may be seen by persons interested at the Commercial Intelligence Branch of the Board of Trade, 73, Basinghall Street, London, E.C.

ANOTHER PETROLEUM-CARRYING VESSEL WRECKED.

The Norwegian sailing-ship "Inglewood," New York to Stockholm, took fire and became a total wreck while lying off the Norwegian town of Mandal on March 28. She was carrying a cargo of petroleum, and was waiting in the roads, having been forbidden to enter the harbour on account of her oil cargo. The ship taking fire, the cases exploded, the detonation being heard eleven kilometres away. Out of a crew of 18 hands only two were saved. Two men were just pulling out to the vessel with provisions when an explosion took place, and one lost his life. The bay was filled for a time with burning wreckage.

BULK OIL SHIPMENTS TO MANCHESTER.

The Port of Manchester Official Sailing List and Shipping Guide states in its latest issue that during the past month the steamers, "Harry Wadsworth," "Mira," "Cymbeline," "Bloomfield," and "Rion" from Port Arthur and Batoum respectively, discharged an aggregate quantity of 14,000 tons oil into the various oil companies' tanks situated below Mode Wheel Locks on the banks of the Canal. Four tankers are due to arrive early in the present month with an aggregate of 10,000 tons for Manchester.

BATOU PETROLEUM SHIPMENTS.

The following were the shipments of petroleum products from Batoum during the week ended March 15th, o.s. (in poods):—

	Illuminating Oil.		Other Products.	
	1907.	1908.	1907.	1908.
To Europe ..	594,000	—	1,000	17,000
To the East ..	216,000	34,000	5,000	2,000
To Russian Ports.	—	113,000	—	2,000
From 1st Jan. to 15th Mar. :—				
To Europe ..	3,488,000	2,684,000	2,046,000	1,843,000
To the East ..	2,453,000	3,206,000	12,000	12,000
To Russian Ports	355,000	910,000	22,000	8,000

Change of Address.—Messrs. Worthington and Boler have removed their London offices from 70, Gracechurch Street to 17, Philpot Lane, E.C.

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INCLUDING

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EXTRACT FROM AUTHOR'S PREFACE TO SECOND EDITION.

The favourable reception accorded to the first edition of "THE OIL FIELDS OF RUSSIA," both by the press and by the public, has proved that the author was able to achieve his aim of producing a work of practical value to those interested in Russian and other petroleum fields, and the time has now come for a new edition.

The text of the work has been carefully revised and brought up to date, and the statistical data have been in some cases presented in more convenient form, as well as revised so far as the official Russian statistical data permit.

A brief description, in chronological order, has been given of the labour disturbances, the detrimental effect of which has been to some extent compensated by the run of high prices, enabling companies unburdened by severe financial obligations to pay substantial dividends, notwithstanding the losses sustained.

Further particulars concerning the uses of electrical power on the Oil Fields and details of the recent active exploitation of the great Surakhany Gas Fields have also been given in the present edition. Several of the illustrations have been replaced by more instructive figures.

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PRACTICAL APPLICATION OF PRINCIPLES GOVERNING THE ACCUMULATION OF OIL.

A Chapter from a Publication by Messrs. W. T. GRISWOLD and M. J. MUNN upon the Geology of the American Oil Fields.

A knowledge of all the factors governing accumulation in any attempt to locate oil territory is of the greatest importance. These are the porosity of the reservoir rock, the geologic structure, and the degree of saturation by water. The first can be determined only by the drill; the second, under favourable conditions, can be determined by careful geologic work on the surface, and the third by the drilling of a few test wells. Knowledge of the first and third factors is absolutely necessary for a correct interpretation of what is shewn by the map of the surface structure. For instance, in an area where two or more sands are productive the map may shew producing wells on the anticlines along the steep slopes and also in the bottom of the synclines, the productive area not appearing in any way to conform to the structure; but if the top of the water in each of the sands be taken into consideration it will be seen that the sand producing oil on the top of the anticline is wet, the one from which the oil is taken in the trough of the syncline is dry, and the one producing along the slope is saturated with water up to a certain level, with the oil immediately above.

The geologic structure of the oil-bearing stratum is an important factor in the location of accumulations of oil and gas. Under certain conditions this factor can be determined prior to the descent of the drill. It now becomes necessary to consider what these conditions are, the reasons for the same, and what steps are necessary for determining the structure of a deep-lying oil sand.

The various rock formations which appear at the surface within the Appalachian oil fields, as well as the underlying strata that have been pierced by the drill, are of sedimentary origin—that is, they were laid down as sediments in a body of water.

The Appalachian oil fields occupy an area which was an inland sea or gulf during the Devonian and Carboniferous periods. Into this sea was washed the disintegrated and dissolved material from the surrounding land, and this material was deposited on the sea bottom in layers more or less parallel. The size of the inland sea did not remain constant. From the geologic evidence it is plain that at some periods the sea was increasing in area and depth, and that at other periods it was diminishing. This expansion and contraction of the water-covered area probably was repeated many times, and the sediments laid down in this body of water varied according to the conditions of the sea. These deposits consist of shales, sandstones, limestones and coals.

Fine soft shale results from the erosion of a much-weathered and deeply disintegrated land surface, and it is deposited in that portion of the sea where the currents are slight and no longer have power to transport fine particles.

Sandstone represents a deposit made in moving currents or along shore where the motion of the water had power to wash out and carry along the finer particles

of material, leaving the coarser grains to form sandstone.

Limestone may be formed in different ways. The lime and magnesia of the soil are washed out and carried to the sea in solution. Myriads of animals living in the sea have formed their shells and bones from the lime and magnesia in sea water, and, on dying, left large deposits of these material, which have been cemented together, forming limestones. Some plants of the sea cause a deposit of lime about themselves. Limestone may be formed by precipitation from the sea water. In these ways the great beds of limestone may have been formed. Those limestones which carry marine forms, such as shells, were probably laid down in still water and in smooth, even sheets over large areas. For this reason they are probably the best strata to be used as geologic markers for the formations.

The coal beds represent the remains of vast swamps in which moss, ferns and trees grew. These plants, on dying, fell into the water, and formed great beds of peat that later was compressed into coal.

Adjacent to the coal beds and at other horizons are found clay and fire clays. Clay is of the same composition as shale, without its bedding planes. Fire clays are clays from which has been extracted the more fluxible materials, presumably by the action of plant life. The degree to which the easily fusible material has been extracted determines the refractoriness of the clay.

In studying a region of sedimentary deposits it is possible to reason out with a fair degree of exactness what movements were taking place in the earth's crust at the time some particular deposit was laid down. As an example, it is interesting to consider what were the conditions during the time of the forming of the great sandstone known in Ohio as the "Berea grit" and in Pennsylvania as the "Thirty-foot shells."

This sandstone extends from the vicinity of Wheeling, W. Va., to the west fully a third of the way across Ohio, to the north nearly to the great lakes, and to the north-east almost to the line of New York State. The thickness of the sandstone remains nearly constant, being from 30 to 40 feet. It is composed of clean, fine-grained sand of nearly uniform texture. The upper portion of the rock to the depth of 18 to 20 feet is cemented probably by calcareous matter into an impervious rock. This cap is generally present, and in some places has thickened to the full depth of the sandstone, making the complete stratum impervious to oil and gas. Directly above the cap to the Berea sand is a black shale, above which is shale of various colours, which extends for some hundreds of feet to the next great sandstone, the Pocono, or Big Injun, as named by the drilling fraternity.

A sandstone of the extent and uniform thickness of the Berea could not have been laid down at one time. This sandstone must have grown, being extended on its

outer edge by the sea gradually encroaching upon the land, the waves washing down and cleaning the materials of the shores, depositing as a beach the heavier particles and carrying the finer portions out into deeper water. The rate of encroachment of the sea upon the land must have been slow and regular, as the sand is found thoroughly cleaned and of almost uniform thickness. The shore from which this sand was derived was probably low, and consisted of previously worked over deposits. From a bluff or rugged shore the broken pieces of rock would not be of the same uniform size as the grains of the Berea sandstone. When the sand beach became submerged it received upon its upper surface the calcareous deposits cementing it together, and later the full area of the sandstone was covered by the great shale deposits. From the conditions under which the Berea sandstone was deposited it is probable that this stratum was not level when laid down, but had a general dip seaward, the amount of which depended on the rate of subsidence of the land area.

From the mode of deposition of sedimentary formations it is evident that originally the strata consisted of smooth, though not necessarily level, sheets.

It is possible to conceive of a coal bed growing by the rising of the water of a sea, which extended the swamp farther inland, while the outer edge became too far immersed to allow of vegetable growth, but coal beds were in all probability level when formed.

The Pittsburg coal, which covers an area of 6,000 square miles, carries within itself evidence of the level surface of the swamp in which it was formed. Not far from the middle of this bed are two small shale partings about 4 inches apart. The space between them is called the "bearing-in" bench. These partings are characteristic of the bed over a large area. They were formed by high water which carried fine sediment into and over the swamp at two periods not long apart geologically. As a large area received nearly the same amount of sediment, the bed must have been formed in one vast level swamp.

As each succeeding sedimentary deposit was laid down in a smooth, fairly even sheet upon the bottom of

the sea the distance between beds remains nearly constant over small areas; in other words, there is a certain degree of parallelism between beds composing deposits of this character.

The amount of material laid down by the action of the waves and currents is not the same at all points, but may gradually thicken or thin in any direction. This difference in deposition from point to point prevents succeeding beds from lying perfectly parallel one with another, but probably this variation is fairly regular and at a somewhat uniform rate. This rate of variation of the interval between any two beds of rock may be determined if a number of measurements of the distance between the two beds at different points in the area under consideration can be obtained.

If, however, at any period all or a portion of the area was above sea-level, it no longer received sediment, but was worn down by erosion, which in some places may have removed only a little of the surface rocks, but in other places completely removed the underlying formations. In later periods, when this surface was again submerged, it received other sediments, generally in equal amounts, and the upper formations were laid down across it in approximately parallel layers, but not necessarily parallel to the earlier-deposited formations. The relation between the upper and the lower formations, under these conditions, depends on the uniformity of the erosion and the absence of any folding prior to the time of second submergence. This relation is called an unconformity. In areas where it exists it is necessary to have positive data with reference to the distance of the deep-lying beds from the surface strata at many points in order to be able to determine accurately the true structure of the lower formations.

From the foregoing considerations it becomes evident that certain general geologic conditions should be known before undertaking the determination of the geologic structure of the oil-bearing sands from strata upon the surface, the first and most important being the possibility of an unconformity between the surface strata and the oil-bearing stratum.

From the nature of these deposits the coal and limestone beds seem to be the most reliable surface strata from which to determine the geologic structure.

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A WORD OF CREDIT TO THE STANDARD OIL COMPANY.

Writing to our contemporary, the *Oil City Derrick*, under date of March 15th, a correspondent from Marietta, Ohio, says:—

The exports of mineral oils from the United States for eight months ending with February, 1908, amounted to \$61,867,000, against an average of \$52,000,000 for the two preceding years.

The condition of the oil-producing business in the United States, notably in Illinois and the Mid-Continent fields during the past two years has been undeniably poor, not to say unprofitable owing to the great over-production of crude oil, and much thoughtless criticism of the Standard Oil Co. has been indulged in on account of its partial failure to take care of all of the production.

But how much worse would the situation have been had not the Standard Oil Co. been in position, aside from its gigantic expenditures in pipe lines and tankage, to export this enormous value in oil to relieve the home market?

Nearly \$62,000,000 worth of oil exported in eight months, or nearly \$8,000,000 worth per month, has constituted the difference between a fair condition of prosperity, as against one of utter demoralisation in the crude oil-producing business in the United States.

While Standard Oil Co. methods of doing business are meeting with much criticism, the producers of crude oil can be thankful that there is in existence in the United States a corporation powerful enough to take care of the situation in the producing business so admirably as the Standard Oil Co. has done in the past two years, thereby averting a condition of hopeless demoralisation such as would have resulted otherwise from the thoughtless rapacity of the army of producers who have flooded the market with millions of barrels of crude oil for which there would have been practically no market but for the titanic efforts of the Standard Oil Co.

While the total exports of mineral oil from the United States was not made wholly by the Standard Oil Co. their proportion of the total is so large that in ascribing the total to them no injustice is intended to the minor exporting business, the intention being to call attention to the Standard's export business as the salvation factor in the crude oil-producing business in the United States.

[It is interesting to note in the midst of all the adverse criticism which is being hurled at the Standard, there are open-minded men who look plain facts in the face and base their opinions accordingly.—ED. P.R.]

New Capital in Eastern Kentucky.—New capital has lately entered into the developments of natural gas in Eastern Kentucky, for a company with a capital of \$500,000, has been formed to develop holdings in Morgan county. Several tests made in that locality have shewn excellent gas producers.

In Illinois.—During 1907 it is estimated that close upon 5,000 wells were drilled in the defined limits of the Illinois field, making a total of between eight and nine thousand wells in the territory. Seeing that the field is capable of holding at least 20,000 wells, it is plain that there is much active drilling ahead before there will be any scarcity of proven land.

THE PETROLEUM TRADE OF AUSTRIA-HUNGARY DURING 1907.

AN INTERESTING RESUMÉ.

The latest issue of *Naphta* contains many statistical figures of the exports of petroleum products from and imports into Austria-Hungary during 1907 as compared with those of 1906.

According to these figures the total exports of various petroleum products in 1907 amounted to 240,445 tons, against 255,950 tons exported in 1906, thus shewing a decrease of 15,505 tons. The exports of various products were:—

	1907. Tons.	1906. Tons.
Illuminating oil	141,372	170,818
Benzine	12,637	15,160
Other products	6,891	6,900
Lubricating oils	55,778	45,000
Residuals	581	300
Crude paraffin	15,121	11,371
Refined paraffin	1,616	
Crude oil, etc.	8,259	6,001
Total	240,445	255,950

The quantities of petroleum products exported in 1907 to the various consuming countries were as follows (in tons):—

	Illuminating Oil.	Benzine.	Lubricating & Other Oils.	Paraffin.	Total.	
					1907.	1906.
Germany ..	83,216	11,500	41,189	7,320	143,225	111,225
Hamburg ..	16,393	114	8,488	2,640	27,635	40,889
Switzerland ..	10,432	5,380	3,786	453	20,051	23,827
France ..	16,879	1,145	875	83	18,983	19,738
Turkey ..	10,455	—	70	102	10,627	18,664
England ..	1,202	10	746	339	2,297	18,520
Italy ..	1,564	1,088	2,558	449	5,659	5,906
Holland ..	—	13	1,768	—	1,781	5,241
Belgium ..	—	165	3,288	205	3,658	4,056
Roumania ..	3	6	84	17	110	2,316
Russia ..	—	1	97	2,146	2,244	1,499
Bulgaria ..	577	15	2	—	594	1,781
Other countries	851	90	1,613	982	3,536	2,288
Total ..	141,372	19,528	64,564	14,736	240,400	255,950

The gradual growth of the petroleum exports from Austria-Hungary during the last 10 years is shewn below:—

	Tons.		Tons.
1898 ..	3,062	1903 ..	70,763
1899 ..	24,463	1904 ..	142,116
1900 ..	39,200	1905 ..	216,720
1901 ..	29,463	1906 ..	255,950
1902 ..	43,404	1907 ..	240,400

The imports of petroleum products into Austria-Hungary in 1907 were (in tons):—

ORIGIN.	Illuminating Oil.	Lubricating & Crude Oils.	Paraffin.	Total.	
				1907.	1906.
Roumania ..	299	18,387	3	18,689	16,459
United States ..	2,464	6,429	266	9,159	13,513
Russia ..	73	873	—	946	3,040
Germany ..	265	608	158	1,031	1,296
Other countries ..	79	240	94	413	732
Total ..	3,180	26,537	521	30,238	35,040

Practically the whole of the imports from Roumania consisted of crude oil, which is admitted at a reduced import duty for use in the refineries in southern Hungary. The imports from the United States consist chiefly of high-class lubricants.

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AMERICAN PETROLEUM EXPORTS.

STATISTICS FOR FEBRUARY.

According to the official publication of the Washington Bureau of Statistics, the exports of petroleum from America from the various ports during February were as under:—

	1907. Quantities. Gallons.	1908. Quantities. Gallons.
CRUDE—		
Baltimore	—	—
Boston and Charlestown..	—	—
Delaware	—	—
New York	—	—
Philadelphia	3,645,587	7,947,658
Galveston and Sabine ..	3,557,256	1,205,153
Totals	7,202,843	9,152,153
Total value for the month, 1907 ..	..	\$393,854
" " " 1908 ..	..	\$529,291
NAPHTHAS—		
Baltimore	—	400
Boston and Charlestown..	—	—
Delaware	—	—
New York	639,517	132,236
Philadelphia	1,385,794	92,508
Galveston	—	—
Totals	2,025,311	224,792
Total value for the month, 1907 ..	..	\$180,403
" " " 1908 ..	..	\$224,792
ILLUMINATING—		
Baltimore	—	—
Boston and Charlestown..	7,899	6,900
Delaware	—	—
New York	45,393,654	46,516,956
Philadelphia	24,840,332	27,597,745
Galveston	1,710,927	1,629,936
Totals	71,862,812	75,751,537
Total value for the month, 1907 ..	..	\$4,434,642
" " " 1908 ..	..	\$4,945,439
LUBRICATING—		
Baltimore	339,500	391,250
Boston and Charlestown..	12,355	14,256
Delaware	—	—
New York	7,268,551	9,504,647
Philadelphia	3,096,121	2,215,973
Galveston	—	25,438
Totals	10,716,527	12,151,564
Total value for the month, 1907 ..	..	\$1,341,243
" " " 1908 ..	..	\$1,614,428
RESIDUUM—		
Baltimore	—	—
Boston and Charlestown..	—	—
Delaware	—	—
New York	53,600	618,750
Philadelphia	1,370,812	3,054,339
Galveston	1,473,585	2,600,700
Totals	2,897,997	6,273,789
Total value for the month, 1907 ..	..	\$116,364
" " " 1908 ..	..	\$231,749
TOTAL MINERAL OILS—		
Baltimore	339,500	391,650
Boston and Charlestown..	20,254	21,156
Delaware	—	—
New York	53,265,322	57,462,787
Philadelphia	34,338,646	41,658,803
Galveston	6,741,768	5,461,227
Totals	94,705,490	104,995,623
Total value for the month, 1907 ..	..	\$6,446,506
" " " 1908 ..	..	\$7,545,699

PETROLEUM IMPORTS INTO YOKOHAMA.

The imports of petroleum into Yokohama during January were 4,083,312 gallons and valued at 391,998 yen, as compared with an import of 1,080,946 gallons in January, 1907, and a value of 194,570 yen.

ENGLISH PATENTS.

(Specially contributed by Messrs. EDWARD EVANS & Co., Consulting Engineers, Chartered Patent Agents, and Enrolled Patent Attorneys, of the United States, of 27, Chancery Lane, London, W.C.)

APPLICATIONS FILED IN GREAT BRITAIN.

Improvements in Mineral Oil and like Burners.—Fawcett, Preston, and Co., Ltd., and Henry Dinsdale, 15, Water Street, Liverpool. No. 5709 of 1908.

Improvements in or relating to Motor Spirit or the like.—Hugh Spencer Robertson and John Ravenhill Graham, Aubrey House, Aubrey Road, Walthamstow, Essex. No. 5437 of 1908.

APPLICATIONS PUBLISHED IN GREAT BRITAIN.

Improvements in and relating to Inverted Gas Burners specially applicable for Use with Petrolised or Carburetted Air Gases and the like.—Walter Donald Marshall, Clerk, of 28, Montrose Terrace, Edinburgh; and William Denholm, Electrician, of 104, Spottiswoode Street, Edinburgh. No. 16292 of 1907.

This relates to a non-atmospheric inverted incandescent gas burner for burning petrolised air or air containing a small percentage of hydrocarbon vapour comprising a heating and distributing chamber, consisting of a fluted device in combination with its containing chamber forming a number of narrow conduits or passages which divide up or distribute a self-burning mixture of hydrocarbon and air in thin separate streams for the purpose of raising said streams to a high degree of temperature.

Improvements in Convertible Petroleum Air Motors.—

Marius Berliet, of 12, Chemin des Quatre Maisons, Lyons, France, Engineer. No. 48183 of 1907.

This relates to a convertible petroleum and compressed air motor, and consists in providing a compression chamber in the upper part of the motor which communicates with the cylinder by means of apertures adapted to be closed at will so as to reduce the deleterious space in the explosion chamber when running with compressed air.

EXPORTS OF AMERICAN PARAFFIN WAX.

In the following table are given the amounts of paraffin wax that were exported from America during the month of January 1908, with comparisons for the corresponding month of last year, the quantities being pounds:—

EXPORTS FOR SEVEN MONTHS.

Exported to—	1907.	1908.
United Kingdom	11,241,757	12,178,950
Belgium	135,866	42,439
France	625,490	463,661
Germany	1,456,032	353,169
Italy	2,951,281	874,068
Netherlands	790,433	627,127
Other European Countries ..	823,561	845,726
Central American States and British Honduras	114,487	100,527
Mexico	2,185,277	1,388,008
South America	83,410	35,421
Japan	12,700	718,187
British Australasia	135,262	262,025
Other Asia and Oceanica ..	312,558	227,521
British Africa	446,881	22,804
All other African Countries ..	1,209,813	1,152,932
Other Countries	4,082	253

BORE HOLES FOR OIL

Contracted for by

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CONTRACTOR TO H.M. GOVERNMENT.

The American Oil Market.

New York, Week ended March 28th.

Conditions in the older fields of the Pennsylvania classification do not seem to have improved to any material extent, the difficulty of hauling machinery and supplies over the roads still acting as a check on operations. Reports from the producing districts have been meagre, and contain little of stimulating interest. Probably the most encouraging feature of the section is the good record maintained by the wells on the Follansbee pool of Brooke county, West Virginia, the best being credited with holding up at the rate of 165 barrels a day since it was agitated a few days ago. Another good producer in the pool was reported to be sustaining 140 barrels. The only development of particular interest reported in Pennsylvania, says the *Oil, Faint and Drug Reporter*, was the completion of a 40-barrel well in the Big Injun formation of Greene county. The completions in West Virginia, Pennsylvania and South-eastern Ohio for the week totalled 67, against 42 for the previous interval, but owing to the more than proportionate increase in the number of dry holes, the gain in new production was comparatively light—680, against 598 barrels. More favourable weather conditions in the Lima field of North-western Ohio and Indiana have occasioned a slight improvement in development work, and the recent enhancement of crude values is expected to keep operators on the *qui vive* for promising exploitation. Although the completions for the week were greater by 10 than those of the previous week, the new production was less by 165 barrels than the former total. Our correspondent in the Kentucky field writes of the expansion of operations with the advent of spring, and encouraging strikes are reported in the districts beyond the scope of recent activity. In the older districts of the State a 50-barrel completion in the Slickford pool of Wayne county constituted the principal development. What is now known as the Twin Hills district of the Mid-Continent field, the name having been changed from Bald Hill, continues to attract the leading interest of operators. The daily production of the district is placed at 750 barrels, and arrangements are in progress to connect the field with a tank farm two miles south of Morris by means of a four-inch pipe line. The Jennings field of Louisiana continues the scene of successful operations, three of the late completions being credited with a production estimated at from 1,000 to 3,000 barrels each. Considerable activity prevails at Spindle Top, Texas, and gratifying results have marked recent developments, including a 500-barrel well and two others that started at the rate of 300 barrels a day. Advices from California note a weakening tendency in prices in Los Angeles, owing to the surplus in the production of the Salt Lake field, but it is believed that this condition will soon be remedied on account of the shortage in some of the northern fields.

REFINED AND PRODUCTS.—Continued activity in the export movement has constituted the most conspicuous feature in the local market for refined, our record of clearances for the week reaching a total of 14,355,000 gallons against 12,825,610 gallons noted previously. Of the former amount 10,625,000 gallons were forwarded in bulk. There has not been the same urgency for additional chartering for forward account, the only engagements reported being of two steamers for China, one for 165,000 cases, April-May, and the other for 135,000 cases, August-September, both New York loading. A British tank steamer was chartered for 30,000 barrels of refined to a French port, April shipment from Philadelphia. Domestic trading has remained within moderate limits, the longer days occasioning the usual abatement in the demand.

More favourable conditions have prevailed in the market for the various products, the demand being signally better for motor consumption. Naphtha, however, has been in comparatively light request for export, clearances for the week aggregating 54,250 gallons,

against 272,600 gallons during the previous week. Values have undergone no quotable change.

CLOSING QUOTATIONS.

	CRUDE.	Week ended	
		Mar. 21. 1908.	Mar. 28. 1908.
Pennsylvania crude in bbls.	—	—
Pennsylvania crude in bulk	—	—
Residuum, bbls. for export	—	—

CRUDE AT THE WELLS.

The quotations for oil represented by credit balances were;—

		Week ended	
		Mar. 28. 1907.	Mar. 28. 1908.
Pennsylvania	.. ..	\$1.78	\$1.78
Tiona	.. ..	1.78	1.78
North Lima	.. ..	0.94	1.04
South Lima	.. ..	0.89	0.99
Indiana	.. ..	0.89	0.99
Illinois, heavy, below 30 deg.	.. ..	—	0.60
Kansas and Indian Ter., 32 deg. and above	.. ..	0.41	0.41
Heavy	.. ..	—	0.28
Humble, Tex.	.. ..	—	0.70
Saratoga	.. ..	—	0.71
Sour Lake, Tex.	.. ..	—	0.70
Jennings, La.	.. ..	—	0.67
CANADIAN OIL:—			
Petrolia	.. ..	1.34	1.44
Oil Springs, less pipeage	.. ..	1.51	1.41

REFINED—FOR EXPORT.

	In cents.	Week ended	
		Mar. 28.	Mar. 28.
Barrels, cargo	.. .. per gal.	8.75	@ 10.75
Philadelphia	8.70	@ 10.70
Bulk, New York	5.00	@ 7.00
Bulk, Philadelphia	4.95	@ 6.95
Cases, New York	10.90	@ 13.90
Cases Philadelphia	10.85	@ 13.85

REFINED IN CASES—110 FIRE TEST.

		Week ended	
		Mar. 21. 1908.	Mar. 28. 1908.
3,000 to 10,000	.. ..	11.05	11.05
1,000 to 3,000	.. ..	11.10	11.10

REFINED—JOBGING LOTS.

In barrels, pkgs included.

		Week ended	
		Mar. 21. 1908.	Mar. 28. 1908.
120 fire test, S.W.	.. .. in barrels	12	12
130 fire test, S.W.	.. ..	12½	12½
150 fire test, W.W.	.. ..	13½	13½
In bulk from tanks	.. ..	10	10
300 fire test	.. ..	13½ @ 14	13½ @ 14

NAPHTHA AND GASOLINE.

		Week ended	
		Mar. 21. 1908.	Mar. 28. 1908.
Naphtha, Auto, 66 @ 72 deg.	.. ..	14.00	14.00
Gasolene, 86 deg.	.. ..	23.00	23.00

PENNSYLVANIAN OIL RUNS from Mar. 11th to Mar. 24th were:—Mar. 11th, 98,496; Mar. 12th, 92,509; Mar. 13th and 14th, 297,519; Mar. 15th, 20,007; Mar. 16th, 91,073; Mar. 17th, 198,227; Mar. 18th, 221,768; Mar. 19th, 294,970; Mar. 20th and 21st, 137,913; Mar. 22nd, 233,588; Mar. 23rd, 87,296; and Mar. 24th, 106,159. Includes Illinois Oil.

THE DELIVERIES OF PENNSYLVANIAN OIL from Mar. 12th to Mar. 25th were:—Mar. 12th, 166,782; Mar. 13th, 140,016; Mar. 14th and 15th, 309,164; Mar. 16th, 188,676; Mar. 17th, 218,978; Mar. 18th, 190,244; Mar. 19th, 179,577; Mar. 20th, 169,105; Mar. 21st and 22nd, 354,304; Mar. 23rd, 139,853; Mar. 24th, 172,237; and Mar. 25th, 184,036. Includes Illinois Oil.

CLEARANCES FOR THE WEEK.

During the week ended Mar. 27th and since Jan. 1, the clearances of petroleum, in gallons, from the port of New York, were as follows:—

	Week.	Year.	1907.
Refined	14,355,300	127,677,910	126,078,020
Crude	1,730,015	3,313,625	787,370
Naphtha	54,250	1,446,420	1,869,280
Residuum	—	573,900	168,500

EXPORT STATISTICS.

The total exports from the port of New York and from the United States have been:—

	Gallons.
From New York, week ended Mar. 27th	20,870,415
Total from New York, from Jan. 1st, 1908	186,884,172
Same period last year	168,891,458
Increase	17,992,714
From United States, week ended Mar. 27th	37,641,060
Total from United States since Jan. 1st, 1908	352,410,660
Same period last year	307,219,177
Increase	45,191,483

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The "Review" Shipping List.

APRIL 10, 1908.

(The following abbreviations are used in this table:—L. Left; P. Passed; Arr. Arrived; Sp. Spoken; Tr. Trading.)

Vessel.	From.	For.	Latest Date and Position.	Vessel.	From.	For.	Latest Date and Position.
ALCHYMIST	Algiers	Bilbao.....	L. Mar. 31	EZIO	—	—	Coasting Peru
ALEMBIC	London	Lisbon.....	Arr. Mar. 25	FRANCE MARIE ..	Santander ..	Vigo.....	Arr. April 1
ALICE ISABELLE..	Philadelphia	Sables		GEESTEMUNDE ..	Tyne	Philadelphia	L. Mar. 27
AMERICAN	New York ..	d'Olonne	Arr. Mar. 23	GENESSE	Sabine Pass	Manchester	In Port,
APPALACHEE	San Francisco	Puerto.....	P. Sand Key,	GEORGIAN	Cardiff	Novorossisk	April 8
APSCHERON	Batoum	Saigon.....	Mar. 23	PRINCE			
ARAL.....	Tyne	Rouen.....	At Hong Kong,	GOLDMOUTH	Freshwater..	Hong Kong	L. April 3
ARAS.....	Baltimore ..	Philadelphia	April 1	GUTHEIL	Philadelphia	Danzig	P. Helsingborg,
ARGYLL	—	London	L. April 7	HAINAUT	Piræus.....	Antwerp	April 6
ASHTABULA	Shanghai ..	—	L. Mar. 27	HARRY			
ASTRAKHAN.....	Hamburg	—	Arr. April 8	WADSWORTH	Hull.....	New Orleans	L. Volo,
ATLAS	—	—	Coasting U.S.	HELIOS.....	Bremen	New York ..	April 1
AUGUSTA	Liverpool ..	Baltimore ..	(Pacific)	HERMIONE	& Tyne	Blaye	P. Prawle Pt.,
AUGUST KORFF..	Hamburg ..	Philadelphia	Arr. Mar. 28	HOTHAM	Philadelphia	New York ..	April 7
AUREOLE	Tyne	New York ..	P. Dunnet Head,	NEWTON	Hamburg ..	Kustendje ..	P. Dover,
AZOV.....	—	—	March 29	IMPERIAL	Sunderland ..	—	Mar. 28
BAKU STANDARD	Havre	Philadelphia	Coasting U.S.	IOANNIS COUTZIS	Rouen	Piræus &	Tr. on Lakes btn.
BALAKANI	Batoum	Amsterdam..	(Pacific)			Batoum	U.S.A. and Can.
BATOUM	Tyne	Kustendje ..	Arr. April 8	IROQUOIS	New York ..	London	P. Constant'ple,
BAYONNE	Batoum	Venice.....	L. Mar. 28	J.B.AUG.KESSLER	Madras	Aroe Bay ..	April 5
BEACON LIGHT ..	Philadelphia	Havana	Mar. 25	JAMES BRAND	London	Kustendje ..	L. Mar. 27
BLOOMFIELD	Ely Harbour	Penarth	Trading on W.C.	JULES HENRI	New York ..	Marseilles ..	L. Mar. 31
BORJOM	Alexandria..	Batoum	of South Amca.	KURA	Kustendje ..	Trieste.....	P. Constant'ple,
BRILLIANT	Stettin &	Philadelphia	L. Mar. 17	LA CAMPINE.....	Antwerp	Philadelphia	April 2
BROADMAYNE	Tyne	—	April 4	LA FLANDRE	Ghent	New York ..	Arr. Mar. 23
BULLMOUTH	Balekappan	Singapore ..	Arr. April 7	LA HESBAYE.....	Antwerp	New York ..	Arr. April 4
BULYSES	Cardiff	Kustendje ..	L. Constant'ple,	LA VIGUESA.....	Port Arthur	Buenos Ayres	P. Dover,
BURGERMEISTER	Danzig	Philadelphia	April 3	(Texas)			April 8
PETERSEN				LACKAWANNA....	Bengkalis ..	Thameshaven	P. Prawle Pt.,
CALCUTTA.....	San Francisco	Shanghai ..	L. Mar. 28	LANSING.....	San Francisco	Pt. San Luis	April 2
CAPTAIN A. F.	Hamburg	New York ..	In Port, April 8	LE COQ.....	Kustendje ..	Havre	Arr. Mar. 25
LUCAS	& Tyne		P. Constant'ple,	LOUTSCH	Batoum	Odessa	At Malta,
CARDIUM	Samboe	Palembang..	April 1	LUCERNA	Tyne	Philadelphia	April 8-9
CATANIA	San Francisco	Pt. San Luis	Arr. April 6	LUCILINE	New York ..	Cette	Mar. 16
CAUCASIAN	Port Arthur	Antwerp	Mar. 24	LUMEN.....	Tyne	Philadelphia	P. Butt of Lewis,
	(Texas)		Arr. April 3	LUX	Rouen	New York ..	April 1
CHARLOIS	New York ..	Amsterdam..	P. Mar. 30-31	MAKKAWEI	Marseilles ..	Novorossisk	P. Gibraltar,
CHESAPEAKE	Cardiff.....	Liverpool ..	Mar. 24	MANHATTAN	New Orleans	Bremen and	April 5-6
CHESTER	Batoum	Antwerp	L. Feb. 21	MANNHEIM	Hamburg	Antwerp	L. Mar. 28
CIRCASIAN	—	—	Arr. Mar. 30	MARGARETHA ..	and Tyne	Philadelphia	P. Lizard,
PRINCE				METEOR	Batoum	London	April 8
CLAM	Philadelphia	Dunkirk	Off Pt. Lynas,	MEXICAN PRINCE	Shanghai ..	—	April 2
COL. E. L. DRAKE	Tacoma	San Francisco	April 8	MIRA	Penarth	Philadelphia	Off the Wight,
COWRIE	Aroe Bay ..	Europe	L. April 1	MUREX.....	Manchester	Penarth	April 8
CUYAHOGA	Philadelphia	Manchester	P. Sagres,	NARRAGANSETT..	Balekappan	Singapore ..	Arr. Mar. 29
CYMBELINE	Avonmouth..	Port Arthur	Mar. 27	NERITE	London	New York ..	Arr. April 2
CZAR NICOLAI II.	Hamburg ..	—	Mar. 29	NEW YORK	—	—	Tr. in China
DAGHESTAN.....	Antwerp	Batoum	Arr. Mar. 23	OAKWOOD	Southampton	New York ..	Seas
DAKOTAH	San Francisco	Hong Kong..	P. Fastnet,	OBERON			In Wireless Com.,
DELAWARE	Liverpool ..	Philadelphia	Mar. 29				Brow'd, April 6
DEUTSCHLAND ..	New York ..	Swinemunde	Mar. 29	OCEAN	Cienfuegos ..	London	L. April 5
DIAMANT	Philadelphia	Hamburg ..	L. April 3	OILFIELD	Cardiff	New York ..	P. Barry Island,
EDWARD	Port Arthur	Antwerp	In Port, April 5	ORIFLAMME	Philadelphia	Antwerp	Mar. 26
DAWSON	(Texas)		P. Cape Henry,	OSCEOLA	Tyne	Philadelphia	P. Beachy Head,
ELAX	Rotterdam..	—	Mar. 26	OTTAWA			April 7
ELISE MARIE	New York ..	Hamburg ..	In Port, April 5	OURAL	Blaye	Philadelphia	In Port,
ENERGIE	Hamburg	Philadelphia	Arr. Mar. 22	PALEMBANG	Barry	Montevideo	Mar. 28
	& Tyne		P. Dunnet Head,		London	N. Orleans or	Arr. April 6
ERIVAN	Genoa	Batoum	Mar. 24		Batoum	Galveston	Arr. Mar. 16
ETELKA	Kustendje ..	Havre	Arr. April 7			Liverpool &	P. Dover,
EUPLECTELA	Kustendje ..	Bombay	P. Constant'ple,			Manchester	March 29
EXCELSIOR	Rotterdam ..	New York ..	Mar. 28				Arr. April 7
			At Port Said,				Tr. East Indies &
			April 7-8				China Seas.
			P. Lizard,				
			April 2				

Vessel.	From.	For.	Latest Date and Position.	Vessel.	From.	For.	Latest Date and Position.
PAULA	New York ..	Swinemunde.	P. Dunnet Head, April 4	STANDARD	Tyne	Philadelphia	P. Dunnet Head, Mar. 25
PECTAN	London and Emden	Galveston ..	P. Prawle Pt. Mar. 23	STROMBUS	Freshwater..	Europe	L. Singapore, April 3
PENNOIL.....	Philadelphia	Dover	L. Mar. 31	SUN	Philadelphia	Avonmouth	At New York, March 30
PERLAK	Hong Kong ..	Palembang..	L. Feb. 17	SUNLIGHT.....	Rivadesella..	Swansea	In Port, April 8
PHOEBUS	New York ..	Hamburg ..	L. April 1	SURAM.....	Dublin	Newport	Arr. April 7
PINNA	Yokohama ..	Gaviota	L. April 5	SUWANEE	Avonmouth..	Philadelphia	L. Mar. 23
POTOMAC	London	Philadelphia	L. April 8	SVIET	Batoum	Odessa	L. Mar. 21
PROMETHEUS....	New York ..	Rotterdam ..	L. Mar. 28	TELENA	Taketoyo ..	Singapore ..	L. Shanghai, April 2
PRUDENTIA	Balekappan	Shanghai ..	L. Mar. 14	TEREK.....	Tyne	Port Arthur (Texas)	Arr. April 5
QUEVILLY.....	Philadelphia	Rouen.....	Arr. April 7	TIFLIS	Philadelphia	Hamburg	In Downs, April 6
RION.....	Penarth	Philadelphia	P. Barry Island, April 3	TIOGA	Sunderland ..	New Orleans	P. Dover, April 3
ROCK LIGHT	Ibrail	Amsterdam..	P. Gibraltar, April 6	TONAWANDA	San Francisco	Chingkiang..	L. Mar. 2
ROMANY.....	Kustendje ..	Bombay	L. Suez, April 5	TROCAS	Hong Kong	Balekappan	Arr. April 3
ROSSIJA	Tyne	Barletta	L. April 1	TURBO.....	Batoum	Hamburg ..	Ashore Haaks, Jan. 7
ROTTERDAM	New York ..	Amsterdam..	In Port, April 5	TUSCARORA	New York ..	Calcutta	Arr. Mar. 27
RUSSIAN PRINCE	Havana	Boston.....	Arr. Mar. 28	TWINGONE	Rangoon....	Madras	Arr. Dec. 12
SALAHADJI	—	—	Tr. Sts. Settlements and Java Seas	VEDRA	Singapore ..	Yokohama ..	L. Mar. 3
SAN CRISTOBAL..	Rochester ..	Minatitlan ..	L. Mar. 17	VILLE DE DIEPPE	Rouen	Philadelphia	L. April 1
SAN IGNACIO	Philadelphia	Pasages	Arr. Feb. 15	VOLUTE	Shanghai ..	Balekappan	L. April 3
DE LOYOLA	—	—	—	WASHINGTON	New York ..	Messina	L. April 2
SAXOLEINE	Tyne	New York ..	Arr. April 8	WEEHAWKEN	Kustendje ..	London	L. Constant'ple, March 31
SEMINOLE.....	San Francisco	Shanghai ..	L. Feb. 24	WILLKOMMEN....	New York ..	Hamburg ..	In Port, April 5
SINGU	—	—	Tr. in East Indies	WINNEBAGO	San Francisco	Itosaki and Shanghai	L. Mar. 28
SNOWFLAKE.....	Kustendje ..	Bordeaux ..	Cld. Constant'ple, April 2				
SOYO MARU	San Francisco & Gaviota	Yokohama ..	Arr. Mar. 19				
SPONDILUS	Rotterdam ..	—	P. Gibraltar, April 5-6				

Latest Market Intelligence.

LONDON OIL MARKET.

Supplied by Messrs. Benjamin & Gee, 31, St. Mary Axe, E.C.

April 10th, 1908.

There has been no change in prices of Petroleum since we last reported, quotations being:—Russian, 5½d. to 6d.; American, 6½d. to 6¾d.; Water White, 7½d. to 7¾d.; Roumanian, 6¾d.

LUBRICATING OILS.

The latest quotations are:—

American pale, £7 7s. 6d. to £11.

American dark cylinder, from £9 2s. 6d.

American filtered cylinder, from £11 15s.

No. 1 Russian, £10 5s.

TURPENTINE.

American Turpentine has been a fluctuating and sensitive market, closing quiet at 36s. 3d. Spot, same price for May-June, and 36s. 6d. for July-December.

LIVERPOOL OIL MARKET.

April 9th.

Refined oils are quiet, and sellers quote 6¾d. for Russian, Galician or Roumanian; and 7¼d. to 8¼d. per gallon for American.

PETROLEUM SPIRIT continues at 1s. 0½d. to 1s. 3d. per gallon for American deodorised, according to quality on the spot.

LATEST AMERICAN PRICES.

NEW YORK, April 9th.

Refined, in cases, is steady at 10.90; Standard White, 8.75; Credit balances, 1.78c.

PHILADELPHIA, April 9th.

Standard White is still quoted at 8.70.

RUSSIA.

BAKU, April 6th.

The Baku oil market is weaker. Crude oil, spot, 26½-27 copecs per pood. Residuals, spot, 26½ copecs. Kerosene, in ships, delivery March, 32½ copecs.

BELGIUM.

ANTWERP, April 6th.

The petroleum market is firm. Price of Standard White, spot, 22 francs per 100 kilos.

FRANCE.

PARIS, April 6th.

Illuminating oil is quoted in bulk, in whole tank waggons, 21 francs per hectolitre; spirit, 31.75 francs per hectolitre. Special white oil, in barrels or cans, 29 francs per hectolitre.

GERMANY.

HAMBURG, April 6th.

The kerosene market is quiet. The price of American Standard White is 7.55 marks per 50 kilos; Russian, 7.35 marks.

ROUMANIA.

April 3rd.

Crude oil from different fields, including pipe line charges, per 100 kgs.	Francs.
Refined oil, exclusive of taxes	6.00-6.50
Benzine, 717-720, including taxes	20.00
Benzine, 750-760	14.00
Residuals in tank waggons, at refinery	3.90-4.00
Paraffin	120.00

PRICES FOR EXPORT.

Refined oil in tank waggons, per 100 kgs.	6.80-7.30
Benzine, sp. gr. 0.710-0.715, f.o.b.	17.00-18.00
" sp. gr. 0.715-0.720	15.00-16.00
" sp. gr. 0.730-0.740	10.00-11.00
" sp. gr. 0.745-0.755	9.00-10.00

INDIA.

BOMBAY, March 21st.

Standard Oil Co., of New York.

Current rates are:—

American, "Snowflake," 150 deg.	Rs. 6 4 2
" Chester, 76 deg.	4 12 2
" Monkey Brand, 76 deg.	4 6 2
" Bulk, 125 deg. (in local made tins)	3 13 6
" " 125 deg. (8 Imperial gallons)	3 3 6

The Asiatic Petroleum Company, Limited.

Current rates are:—

Burmah oil, in tins, per pair	3 8 0
Russian "Rising Sun," bulk, per unit	3 6 0
" " tins, per pair	4 0 0
Roumanian oil, in tins, per pair	3 14 0
"Anchor" per case	4 8 0

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IMPORTS of PETROLEUM into UNITED KINGDOM

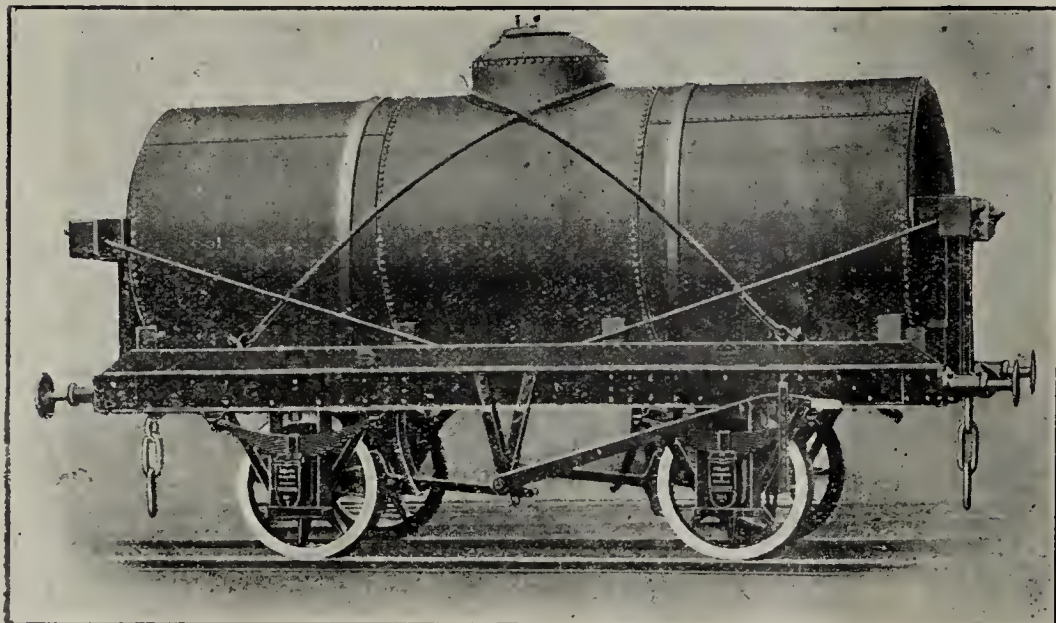
Specially prepared for
this Journal by . . .
the Custom House.

FOR THE WEEK ENDED 30TH MARCH, 1908—

DATE.	PORT AND IMPORTERS.	DESCRIP- TION.	NO. OF GALS.	PORT WHENCE.
Mar. LONDON—				
24	A. Brown and Co. ..	Lub.	4,800	Philadel.
24	Bowring Petroleum Co. ..	"	8,700	"
24	Mordaunt Bros. ..	"	3,080	New York
24	W. H. J. Alexander..	"	2,440	"
25	Anglo-American Oil Co. ..	"	11,960	"
25	Fielder, Hickman and Co..	"	24,000	"
25	London and India Dock Co.	"	1,470	Philadel.
25	Mordaunt Bros. ..	"	3,100	"
25	A. Duckham and Co. ..	"	2,600	"
25	Lubricating & Fuel Oils, Ltd.	"	4,920	"
25	Fielder, Hickman and Co..	"	2,720	"
25	London and India Dock Co.	"	80	Hamburg
26	Page, Son and East ..	"	160	Antwerp
26	Perkins and Homer..	"	2,400	Philadel.
26	A. Brown and Co. ..	"	4,000	"
27	Lubricating & Fuel Oils, Ltd.	"	9,430	"
27	"	"	9,220	"
27	Anglo-American Oil Co. ..	"	21,000	"
27	E. J. Walkinshaw ..	"	5,400	"
27	J. Harrison ..	Lub. Gr.	240	Antwerp
28	Schlieman's Oil Co. ..	Lub.	5,470	Hamburg
28	Mercantile Lighterage Co..	"	10,720	Philadel.
30	Anglo-American Oil Co. ..	"	19,280	"
30	Mordaunt Bros. ..	"	5,000	New York
30	London & India Docks Co..	"	2,680	Hamburg
30	A. Duckham and Co. ..	"	360	"
30	T. H. Lee ..	"	160	"
30	Page, Son and East ..	"	160	Antwerp
30	Wainwright Bros. ..	Naph. Resid.	40	Marseilles
LIVERPOOL—				
24	Meade-King, Robinson & Co.	Lub.	5,000	New York
25	"	Resid.	12,000	Antwerp
25	"	Lub.	9,440	Philadel.
25	Taylor and Son ..	"	240	"
25	Crew, Levick and Co. ..	Resid.	8,190	Newp't Nws.
25	Liverpool Storage Co. ..	Lub.	800	Hamburg
27	J. L. Turnbull and Co. ..	"	200	Boston
27	Meade-King, Robinson & Co.	"	28,600	Baltimore
28	G. W. Wheatley and Co. ..	"	250	Boston
30	Meade-King, Robinson & Co. (Mira)	Gas	949,630	Pt. Arthur
30	"	Lub.	6,760	New York
30	Ismay, Imrie and Co. ..	"	2,000	"
30	Vacuum Oil Co. ..	"	2,600	"
30	G. B. Taylor ..	"	600	"
30	R. Davidson and Co. ..	"	1,200	"
30	Penwarden and Jackson ..	"	250	Antwerp
BRISTOL—				
24	H. R. James and Sons ..	"	2,000	New York
24	Pickfords, Ltd. ..	"	1,000	"
26	"	"	390	Hamburg
26	"	"	240	Antwerp
26	W. G. Clarke ..	"	610	"

DATE.	PORT AND IMPORTERS.	DESCRIP- TION.	NO. OF GALLS.	PORT WHENCE.
March				
27	E. Stock and Sons ..	Lub.	2,000	Hamburg
28	H. Pritchard and Co. ..	"	630	"
30	W. Smith and Co. ..	"	35,160	New York
30	"	Lamp	4,000	"
30	British Pet. Co. (Cymbeline)	"	1,680,000	Pt. Arthur
CARDIFF—				
24	Bristol Steam Nav. Co. ..	Lub.	240	Antwerp
27	Homelight Oil Co. (Blomfield)	Lamp	364,500	Batoum
HARWICH—				
26	D. Howard ..	Lub.	100	Antwerp
26	"	"	400	"
27	"	"	40	"
HULL—				
26	Wisons and N.E. Railway Shipping Co.	"	160	"
26	"	"	1,320	"
26	"	"	120	Hamburg
26	"	"	10,520	"
26	Hull & Netherlands S.S. Co.	Tar Oil	2,000	Rotterdam
26	Mordaunt Bros. ..	Lub.	2,500	New York
26	T. Wilson, Sons and Co. ..	"	10,800	"
27	"	"	21,320	"
28	W. Gilyott and Co..	"	14,760	"
MANCHESTER—				
26	J. T. Fletcher and Co. ..	"	770	Antwerp
28	British Petroleum Co. (Rion)	Lamp	788,800	Kustendje
MIDDLESBRO'—				
30	E. Harris and Co. ..	Lub. Gr.	120	Antwerp
NEWCASTLE—				
26	Furness, Withy and Co. ..	Lub.	37,680	New York
28	Tyne-Tees Steamship Co. ..	"	2,860	Antwerp
30	Anglo-American Oil Co. ..	"	40,400	New York
30	"	M. Colza	15,960	"
NEWPORT—				
30	Jones, Heard and Co. ..	Lub.	2,400	"
PLYMOUTH—				
24	Bristol Steam Navigation Co.	Lub. Gr.	540	Antwerp
GLASGOW—				
24	Clyde Shipping Co..	"	1,160	"
30	R. A. Young ..	"	440	Philadel.
30	J. and A. Allan ..	Lub.	83,200	"
30	"	M. Colza	27,500	"
GRANGEMOUTH—				
27	W. Graham-Yooll and Co..	Lamp	4,000	Hamburg
27	"	"	3,200	"
27	J. Currie and Co. ..	Lub.	4,880	"
LEITH—				
26	J. Currie and Co. ..	"	240	"
26	W. Graham-Yooll and Co..	Lamp	2,180	"
30	G. Gibson and Co. ..	Lub.	2,240	Antwerp

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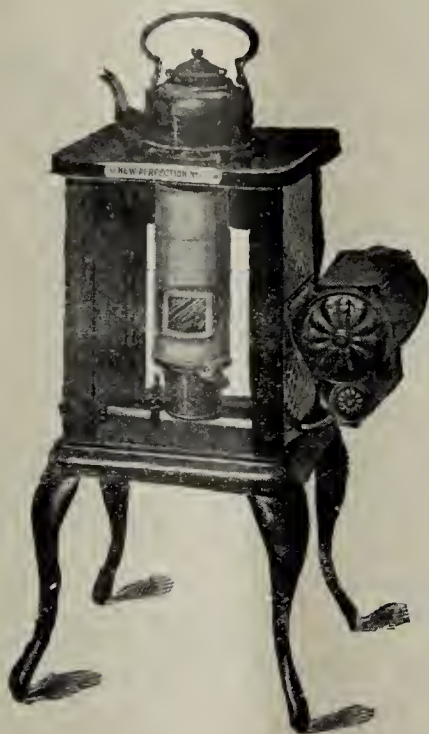
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— QUOTATIONS ON APPLICATION.

IMPORTS.—(Concluded).

DATE.	PORT AND IMPORTER.	DESCRIP- TION.	NO. OF GALLS.	PORT WHENCE.
Mar.	LERWICK—			
30	Olna Whaling Co. ..	Lub.	260	Tonsberg
	BELFAST—			
25	J. C. Pinkerton and Co. ..	"	170	Hamburg
	DUBLIN—			
28	Palgrave, Murphy and Co.	Lamp	11,000	N. Orleans
Total for Week				4,378,160

FOR THE WEEK ENDED 6TH APRIL, 1908—

Mar.	LONDON—			
31	Argo Steamship Co. ..	Lub.	150	Bremen
31	Anglo-American Oil Co. ..	"	26,000	New York
31	American Express Co. ..	"	430	"
31	W. H. J. Alexander ..	"	2,400	"
31	Produce Brokers' Co. ..	"	7,200	"
31	Fielder, Hickman and Co. ..	"	8,760	"
31	London and India Docks Co.	"	6,000	"
April				
1	Beck and Pollitzer ..	"	800	"
1	Mercantile Lighterage Co.	"	26,250	"
1	R. Park and Co. ..	"	120	Marseilles
1	United Shipping Co. ..	"	40	Bremen
2	Page, Son and East ..	"	120	Antwerp
2	M. Record ..	"	5,000	Hamburg
2	H. and G. Dufield ..	"	200	Philadel.
2	G. and H. Green ..	Lub. Gr.	960	New York
2	British Petroleum Co.	Lamp	761,600	Batoum
	(Margaretha)			
3	Anglo-American Oil Co.	"	626,210	Philadel.
	(Potomac)			
4	Schlieman's Oil Works ..	Lub.	5,200	Baltimore
4	G. Jennings ..	Lub. Gr.	200	Hamburg
6	T. H. Lee ..	"	140	"
6	A. Brown and Co. ..	Lub.	2,000	"
6	Page, Son and East ..	"	50	Antwerp
6	British Petroleum Co. (Aras)	Gas	390,000	Baltimore
6	Anglo-American Oil Co.	Naph.	872,960	Bengkalis
	(Lackawanna)			
	LIVERPOOL—			
2	J. Light and Son ..	Lub.	1,000	New York
6	W. H. Samuel and Co. ..	"	1,000	"
4	Pickford's, Ltd. ..	"	500	Hamburg
4	Anglo-American Oil Co.	Gas	403,790	Sabine
	(Genesee)			
4	Bramwell, Fern and Co.	Lub.	186,000	Batoum
	(Oural)			
4	" ..	Resid.	34,000	"
4	Meade-King, Robinson & Co.	"	34,000	"
	(Oural)			
6	" ..	Lub.	186,000	"
6	" ..	"	24,800	Hamburg
6	" ..	"	6,360	New York
6	Vacuum Oil Co. ..	"	3,200	"
6	R. Crooke, Jun. ..	"	2,290	"
6	Geo. B. Taylor ..	"	49,400	"
6	Langley, Smith and Co. ..	"	1,000	"
6	W. Gibson and Sons ..	Lamp	2,050	Boston
6	Penwarden and Jackson ..	Lub.	200	Antwerp
Mar.	BRISTOL—			
31	First Anglo-Russian Oil Co.	"	390	Hamburg
31	M. Whitwell and Co. ..	Lamp	4,000	Philadel.
31	" ..	Lub.	6,000	"
31	W. Smith and Co. ..	"	20,200	"
April				
2	J. S. Barrett and Co. ..	"	1,070	"
2	Ford and Canning ..	"	5,200	"
2	H. Matthews ..	"	850	"

DATE.	PORT AND IMPORTERS	DESCRIP- TION.	NO. OF GALLS.	PORT WHENCE.
April.				
2	H. R. James and Sons ..	Lub.	34,400	New York
2	" ..	M. Colza	8,800	"
3	First Anglo-Russian Oil Co.	Lub.	690	Hamburg
3	Pickfords ..	"	90	"
3	E. Stock and Sons ..	"	2,300	"
4	W. G. Clarke ..	"	220	Antwerp
	CARDIFF—			
2	Bristol Steam Nav. Co. ..	"	480	"
3	" ..	"	1,200	Hamburg
	HARWICH—			
2	D. Howard ..	"	140	Antwerp
	HULL—			
2	Wilsons and N.E. Railway Shipping Co.	"	1,040	Hamburg
			16,120	"
2	Thos. Wilson, Sons and Co.	"	140,280	New York
Mar.	MANCHESTER—			
31	W. Hodgson and Co. ..	"	530	"
31	George B. Taylor ..	"	175,720	"
April				
2	Geo. Fairclough ..	"	2,950	"
2	Liverpool Storage Co. ..	"	39,920	"
2	Meade-King, Robinson & Co.	"	10,400	"
2	Produce Brokers ..	"	4,800	"
2	Bramwell, Fern and Co. ..	"	4,020	"
2	" ..	M. Colza	3,270	"
2	Diamond Lubricating Co. ..	Lub.	2,400	"
2	D. Currie and Co. ..	"	760	Hamburg
2	W. Hodgson and Co. ..	"	400	"
2	Pickford's, Ltd. ..	L. Paste	60	"
3	Meade-King, Robinson & Co.	Gas	364,000	Pt. Arthur
	(Mira)			
3	Homelight Oil Co.	Lamp	661,590	Batoum
	(Bloomfield)			
3	Worthington and Boler ..	Lub.	1,000	Philadel.
3	Manchester Liners ..	"	1,500	"
3	Bramwell, Fern and Co. ..	"	2,490	"
4	C. H. Morton and Sons ..	"	1,800	"
4	Meade-King, Robinson & Co.	"	32,280	"
4	G. B. Taylor ..	"	197,000	"
6	Liverpool Storage Co. ..	"	2,600	"
6	Crew, Levick, and Co. ..	"	8,400	"
6	Anglo-American Oil Co.	Gas	538,300	Sabine
	(Genesee)			
	NEWCASTLE—			
4	P. H. Matthiessen and Co.	Lub.	60	Bergen
	SWANSEA—			
2	Richards, Turpin, and Co. ..	"	1,200	New York
	ABERDEEN—			
2	R. Cannon Reid and Co. ..	L. Paste	120	Hamburg
2	" ..	Lamp	1,200	"
Mar.	GLASGOW—			
31	Anchor Line ..	Lub.	45,170	New York
April				
2	" ..	M. Colza	7,000	"
Mar.	GRANGEMOUTH—			
31	J. Currie and Co. ..	Lub.	2,240	Hamburg
	LEITH—			
31	J. Currie and Co. ..	"	1,090	"
April				
2	W. Graham-Yooll and Co. ..	Lamp	2,620	"
4	" ..	"	3,490	"
4	J. Currie and Co. ..	Lub.	400	"
	BELFAST—			
4	G. Heyn and Sons ..	"	800	Reval
	DUBLIN—			
2	Anglo-American Oil Co.	Lamp	613,440	Philadel.
	(Potomac)			
Total for Week			6,656,870	
Total for the Fortnight			11,035,030	

Telegraphic Address:—"OLEINE."

Telephone Nos.:—{ 249 & 254 LIVERPOOL.
1990 MANCHESTER.**MEADE-KING, ROBINSON & Co.,**

11, Old Hall Street, LIVERPOOL, & 18, Exchange Street, MANCHESTER,

IMPORTERS AND DISTRIBUTORS OF

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BENZOLINE AND BENZINE, SWANSDOWN WATER WHITE AMERICAN PETROLEUM.

The Petroleum Review.

By PAUL DVORKOVITZ.

Vol. XVIII. (New Series.)

APRIL 25TH, 1908.

No. 423.

THE PETROLEUM REVIEW:

The ANNUAL SUBSCRIPTION for both English and Foreign readers is 26s., including Postage. Single Copies may be had at the offices at 1s.

The Editor would esteem it a favour if readers, when communicating with the various firms advertising in our pages, would mention the "Review."

Contributions upon items of interest are always welcomed from subscribers, but in each case these should be accompanied with the name and address of the sender, not necessarily for publication.

Editorial Notes.

In this issue of the REVIEW we publish **Where Oil Tankers are Built.** a descriptive illustrated account of a visit which our representative paid last week to the extensive shipbuilding yards of Sir W. G. Armstrong, Whitworth and Co., on the Tyne—the home of oil tankers. The article has a peculiar interest, inasmuch as at the present time the energy of this well-known shipbuilding yard is wholly concentrated upon the building of no less than six large ocean-going bulk oil carriers, all of which are expected to be in active employment within a few months. Never in the history of bulk oil transport has there been such activity displayed in building new vessels for the continuously-growing demands of the trade, and it says much for the enterprise of English shipbuilding, that an old-established firm like Sir W. G. Armstrong, Whitworth and Co., should lay itself out to cater so admirably for the needs of bulk oil transport. We take this opportunity of congratulating the firm upon its past success in this respect, and trust that the future has greater progress in store, for without the whole-hearted assistance of concerns such as this, it would be impossible for the petroleum industry throughout the world to make real and permanent headway.

There must be thousands of shareholders in the various English-owned oil companies who view with envy the happy position of those of the community who have invested in the **The Burmah Oil Company, Ltd.** From year to year it pursues its career of progress, until now quite a record has been established in its annual statement of profits. These, for the past financial year, stand at something like £600,000, or over thirty per cent. more than the very creditable net gain for 1906. What the directors could have declared had they not continued to adopt the wise policy of liberally writing off for depreciation on the one hand, and placing large sums to the reserve account on the other, remains to be seen; but even now the dividend to be distributed is thirty per cent. The company is

certainly making remarkable progress, as can be seen by a glance at the report published elsewhere in this issue, and the highly flourishing state of the Indian oil trade suggests that for the present, at all events, the future is perfectly safe and good dividends will continue to be the rule and not the exception. We congratulate the board of management upon the gratifying results achieved, knowing as we do that no wafting air of fortune has brought them about, but that they have been the result of the perusal of a policy matured by care and foresight by men of wide experience. What a lesson this teaches those in charge of other oil companies!

The Liquid Fuel Difficulty in Russia—a Suggested Remedy. The conference of liquid fuel consumers, which was held in St. Petersburg, has now concluded its deliberations in regard to the high prices of liquid fuel and how to combat them, and has drawn up a list of recommendations for the

Government. The Conference has recognised the importance of tranquilising the Baku district and thus enabling it to return to normal conditions, and calls for effective measures from the Government with this end in view. In order to prevent petroliferous lands lying idle, the Conference recommends that the concession for petroliferous areas, which are not being worked shall be cancelled. The Government is also urged to thoroughly investigate the new oil fields discovered in various parts of Russia and assist in their development, while it is also suggested that the auctions which are fixed for next November for leasing out fresh plots at Baku shall be cancelled and the plots exploited by the Treasury. All these measures are put forward to increase the production of crude oil, but the liquid fuel consumers also ask for a series of measures which, without increasing the production, would augment the supply to consumers at reasonable prices. These include a proposal that the Government shall receive the royalties due to them from producers in kind instead of money, and use the oil thus received to supply the fuel needs of the State railways and other public institutions, using the surplus for regulating the market prices. It is also suggested that some of the railways shall go back to coal and thus set free a considerable quantity of liquid fuel for the Volga shipping trade, which has no other fuel to fall back on.

With the advent of spring weather, **The American Fields during March.** operations are being actively pushed forward throughout the American oil fields, and the statistics for March shew that the completed wells were in excess of those for the preceding month, although the new production was lower. In the fields producing high grade oil, however, the results shew the increasing difficulty of striking anything approaching prolific territory, and in the Pennsylvanian fields, the average daily production of the new wells completed in March works out at under nine barrels, as against an average of over

thirteen barrels for February and twelve for the first month of the year. The failures in drilling are also greater, and in the various oil-producing districts (excluding Texas and California), out of 860 wells completed during the month, no less than 254 were classed as non-productive. The Mid-Continental fields appear to be going ahead, and here the operations are only curtailed owing to lack of transportation facilities. At the end of the month, it is estimated that in these territories there were no less than 34,000,000 barrels of oil in storage.

A PIONEER AMONG OIL TANKER BUILDERS.

MR. R. SAXTON WHITE.

The gentleman whose photograph we herewith reproduce, is one of the most well-known pioneers among oil tanker builders in the country—Mr. R. Saxton White, of the firm of Sir W. G. Armstrong, Whitworth and Co., Ltd., Newcastle-on-Tyne. Mr. White has for



many years been prominently associated with the Walker shipyards, and until recently was, together with Colonel H. F. Swan, responsible for the control of the yards of the firm at Walker-on-Tyne. Since the decease of Colonel Swan, Mr. Saxton White has assumed single-handed management, and it was owing to his courtesy that our representative was enabled to pay the visit which is illustrated upon the following pages. The great improvements which have been carried out during late years at Walker are traceable to Mr. White's ingenuity.

The Naphta Company has completed its well No. 9 at Mislisora, which yields 10 tons of oil per day. The same firm has started a prospecting hand well in the Telega Valley.

LONDON OIL SHARE MARKET.

FRIDAY, APRIL 24TH, 1908.

The Easter holidays are responsible for business on the Stock Exchange being of a very restricted character, and in the Oil Share Group little or no business has to be recorded. The tendency, however, is for an improvement all round, the most noticeable being the Spies scrip, a few deals in which have taken place at 10s. Commonwealth Oil Corporations remain firm, and Burmahs have strengthened in accordance with the flourishing state of affairs shewn in the directors' report. On the other hand, Shell Transport Ordinary stock are 6d. lower on balance at 44s. 9d. to 45s. 9d., having had a drooping tendency throughout, while the preference shares are also easier to the extent of $\frac{1}{4}$ at $9\frac{3}{4}$ - $10\frac{3}{4}$. The latest details of prices will be found on page 236.

THE TIN PLATE MARKET.

Messrs. Norton, Owen & Co., of 4, Bishopsgate Street Within, London, E.C., report under date April 23rd, 1908, as follows:—

A large amount of business has been done since our last report for delivery over the coming summer and autumn. The mills continue to be fully employed, and it is difficult to obtain prompt delivery for new orders. To meet the increased demand, an additional mill is being laid down by The Old Castle Iron and Tin Plate Co., Ltd., which will come into operation in a month or two hence. The exports in March (particulars below), were highly satisfactory, the figures shewing a large increase over the same month last year—a noticeable feature being the heavy shipments to the United States. Prices are firm, and we quote oil sizes to-day as under:—

1c	18 $\frac{3}{4}$ × 14	124 sheets	110 lbs.	13/3	per box.
1c	19 $\frac{1}{4}$ × 14	120 "	110 "	13/3	"
1c	20 × 10	225 "	156 "	18/4 $\frac{1}{2}$	"

F.o.b. Wales. Tin lining and iron hooping extra.

EXPORTS OF TIN PLATES.

		Mar., 1907. Tons.	Mar., 1908. Tons.	Jan.-Mar., 1907. Tons.	Jan.-Mar., 1908. Tons.
Russia	..	585	1,419	2,141	3,035
German	..	3,435	3,170	10,417	7,439
Holland	..	1,541	2,152	7,193	5,842
Belgium	..	769	686	2,052	2,226
France	..	2,114	2,429	6,573	7,018
Portugal	..	353	1,088	1,872	2,506
United States	..	4,727	4,883	16,019	14,604
British East Indies	..	6,146	3,816	15,140	12,318
Australia	..	1,640	1,515	4,260	5,692
Canada	..	884	1,017	4,688	3,632
Other countries	..	10,740	15,215	30,977	35,716
Total	Tons	32,940	37,390	101,332	100,038

THE ANGLO-RUSSIAN PETROLEUM COMPANY.

The adjourned general meeting of the Anglo-Russian Petroleum Co., Ltd., was held on Thursday at River Plate House, E.C.—Mr. Philip Moore presided, and stated that the meeting was adjourned on March 26th last to enable the directors to get a definite answer from St. Petersburg. He was sorry to say that Messrs. Nobel did not at present feel disposed to do anything in the matter of acquiring certain portions of the company's land. The directors were considering what course they should adopt, and a special general meeting to consider the position would be called within a month. The report was adopted.

THE HOME OF OIL TANKERS.

A VISIT TO ONE OF SIR W. G. ARMSTRONG, WHITWORTH AND COMPANY'S SHIPBUILDING YARDS.

(By OUR ROVING COMMISSIONER.)

- Nothing, we venture to suggest, could be of more direct interest to our readers in all parts of the world than a brief illustrated sketch of a visit to the extensive works of a company which, for many years, has taken so keen and so important an interest in the petroleum industry by reason of the fact that upon its stocks the majority of the English oil tankers have been built—we refer to the well-known firm of Sir W. G. Armstrong, Whitworth and Co., of Walker-on-Tyne.

Of late years, the transport of oil in bulk to all parts of the world has assumed an importance which is nothing if not remarkable. The evolution of time has brought into prominence the work of the shipbuilder and the skill of the designer in marine work, and in place of the comparatively small transport trade in barrelled oil, an enormous fleet of bulk oil carriers to-day moves in almost every sea of the globe, and ten thousand tons of bulk oil are now transported from one hemisphere to the other with a rapidity and an ease which, a quarter of a century ago, were scarcely dreamt of. The growth of the world's trade in the transport of oil in bulk has been truly marvellous, and little less so has been the efforts of many of our English shipbuilding firms to cater for this new and increasingly important branch of marine engineering science.

What position the bulk oil transport trade of to-day

would have occupied had it not been for the activity displayed by this firm, one pauses to imagine, but the

fact remains that had it not been that when the oil trade was in its youth, Messrs. Armstrong, Whitworth and Co. paid special attention to the great needs for improving the transport of petroleum products, the trade to-day would certainly not have attained its present importance, nor would bulk oil transport have acquired its present astounding volume. Back in the early eighties, when the firm was amalgamated with the old established yards of Messrs. C. Mitchell and Co., the question of the bulk transport of petroleum commenced to receive the attention of the heads of the firm, and from that day to this, the intervening time has been full of progress for the firm,

and success for those who have heart and soul thrown their energy into the exceedingly difficult problem. In this direction the name of our worthy friend—Colonel H. F. Swan, who passed away only a few weeks ago—takes a foremost place. Then we have the great zeal and energy displayed by Mr. Saxton White, Mr. Orde, and many others, all of whose efforts were directed toward perfecting the bulk transport of petroleum, and whose names will for all time be inseparably associated with this branch of marine engineering.

It is the good fortune of the firm of Sir W. G.



THE NEW TANKER "CARPATHIAN" ON THE STOCKS.

Armstrong, Whitworth and Co. to look back to the time when they, in 1886, constructed for the Deutsch-Amerikanische Petroleum Actien Gesellschaft, the oil tanker "Glückauf," followed during the same year by the "Vorwärts," these being the first bulk oil carriers of the Atlantic, and to their credit to-day it can be said that the early interest shewn in this special branch of shipbuilding has been more than maintained, for on their stocks now stand no less than six large oil tankers in the course of construction.

Until our representative was permitted to inspect the extensive shipbuilding yards upon the Tyne owned by

Sir W. G. Armstrong, Whitworth and Co., the outside world knew but little of the importance which the building of oil tankers play in this, the largest shipbuilding yard upon the Tyne. Those interested in the oil trade would read of the placing of an order for an oil tanker; several months afterwards the ceremony at the launch of the vessel would be recorded in the REVIEW, while presently she would take her place as one of the world's fleet of oil boats, and her movements chronicled in our shipping list. The observant reader would, maybe, notice who were the

builders of the vessel, but beyond this, it is very doubtful if a moment's thought would be given to the great work which in those several months had been accomplished while the vessel was under construction. Nevertheless the work is full of intense interest, for from the time the first plank of the model is laid down until the vessel has left the hands of the shipwrights, each section of labour upon the vessel has its own direct importance and interest.

We will, then, take the reader in imagination through those vast areas at the bend of the river Tyne upon its northern banks, and about four miles east of Newcastle,

upon which Sir W. G. Armstrong, Whitworth and Company's Walker shipbuilding yards are situated—the English home of oil tankers—for it is here that approximately one hundred of the largest bulk oil carrying vessels in the world have been constructed.

The first thing which is bound to strike the visitor upon entering the works at Walker, is the quietude which pervades the various offices in the managerial departments. Everything is being conducted in that easy quiet way which suggests perfect organisation, that it requires a long stretch of imagination to think that one is practically in the midst of one of the busiest

centres of shipbuilding in the United Kingdom. The reception room—a spacious apartment—is hung with coloured paintings, or well executed photographs of the hundreds of vessels that have left the stocks of the firm for the past quarter of a century or more, and among these we quickly see some of the early oil tankers constructed by the firm long before it was known under its present name. But we will not linger here, except to momentarily pause to inspect the numberless models of every conceivable type of ocean-going vessel which are arranged for inspection in an



SIDE VIEW OF STOCKS SHEWING STACK OF OIL TANK TUBES.

adjoining room—the scene, by the bye, of many a speech after a launch ceremony. We leave behind us the miniature army of draughtsmen and clerks, each busy in his own department, and pass from the offices into the yards. What a deafening noise welcomes us as we descend the steps into the yards below! Behind us, the managerial staffs pursue their work in quiet, but here, how great a change! The two thousand workmen who regularly find employment at the Walker yards know not what quiet is. Pneumatic hammers are going by the hundred, and the din and clamour of the ponderous iron sheets as they

are swung round from one position to another by gigantic cranes cause it almost a matter of impossibility to converse. Passing down the yard, and nearing the stocks, the noise increases, until one seeks consolation in the words of the writer who speaks of the pleasures



TWO TYPICAL TYPES OF—

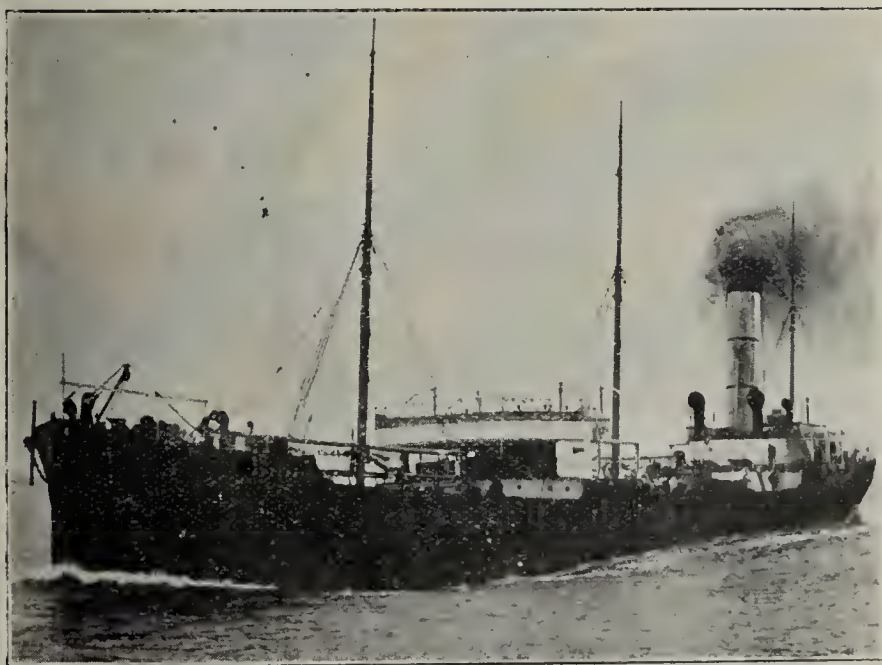
and steel from the neighbouring works. The machine shops with their powerful machinery for punching, shearing, rolling and bending plates and angle bars, cannot but appeal to the privileged visitor as one of the most interesting spots in the whole of the works. Here, the large iron and steel plates for the sides of the oil tankers, and for the inside tanks themselves, pass with amazing rapidity from one machine to another until they emerge on a travelling crane ready to take their respective places upon the tankers under construction. The machines themselves call for more than passing comment. One in particular attracts our attention, for it is "shearing"—if one can use the word—half-inch iron plates, going through the metal with that ease with which a pair of newly-ground scissors would cut thin sheets of paper. In other parts of the building, strange-looking pieces of machinery are engaged in punching rivet holes through the plates, the work being done with amazing quickness. A *corps* of workers have



VIEW OF THE YARDS SHEWING THE REAR OF THE STOCKS.

of being "far from the madding crowd." We first ascend to the model shops, for it is here that practically the first work upon an oil tanker begins. After the designs have left the skilled hands of the draughtsman, and are approved by the prospective owner of the vessel, they pass to the mould loft. It is, however, more like a good-sized ballroom, as may be guessed when one remembers that before the first girder is put into position on the stocks, the whole of that oil tanker stands drawn down in full-size form in this tremendous building.

We now pass into the very heart of the works—the plate punching, bending and shearing shops—which are situated immediately at the rear of the stocks. Nothing could have been arranged with more regard to the expeditious handling of the ironwork used upon the oil tankers, than is this building. It covers a very large area, and with it, as with other departments of the yard, a network of private railways make connection with the North Eastern Railway Company's main-line system, which gives every facility for the quick transport of iron



—OIL TANKERS—"ROMANY" AND "TUSCANY."

hold of the iron plate in order to steady it when passing under the punch, and, in quick succession, hole after hole is punched out, until at last the whole plate has holes running round every side of it, each varying not

the slightest fraction of an inch from the other. Some of the plates now pass into the bending machine, where they acquire the exact bend for the position they have to take up in the completed vessel, yet these too, in quite a very short time, are swung round by the aid of the travelling crane and dropped outside the "shop" in readiness for other cranes to lift them to the sides of the stocks. It is an interesting operation to watch the manner in which the workmen tackle the bending of the great bars which form the frame-work of the oil tanker, and anyone who has watched the work, carried out as it is upon gigantic grids by an army of workmen, cannot but admire the energy with which an English worker settles down to a real good piece of hard work.

We now leave this noisy shop with its whirl of ponderous machinery and its busy air of activity, and proceed to the smiths' forge, where all the necessary smiths' work is executed. Smiths' fires and forges are here galore, yet the chief characteristic of the building

have now been placed in the best position possible with a view to facilitating the handling of the various material required for the construction of the vessels on the stocks. Of the machine shops, interesting though they are, we need only say that they are, like every other branch of the works, thoroughly up to date, and lathes of every size and description find a place here.

The building above the machine shops is the joiners' and carpenters' department, and at the time of our visit, this was the one department of the yards which was not working up to its full strength. The joiners were engaged in a strike, and, as a consequence, much of the furniture required for the completion of boats on the stocks had to await the return of the men to work. But even here work was by no means at a standstill, for an army of smart apprentices was throwing all its energy into the situation, and relieving as far as it possibly could the difficulty. In this building everything in the nature of the furniture required for an ocean-going



A CLOSER VIEW OF THE STOCKS.

is that the atmosphere is quite clear of smoke. We marvel at this, and it is explained by our courteous guide that powerful plant is now installed throughout the forge in order to carry off the smoky atmosphere which we had previously thought was inseparable from a smithy. Our attention is called as we emerge from the smithy to a great pile of wide diameter pipes. There must certainly be several hundred of them, but in a few weeks they will all be in their positions in the various oil tankers under construction, for they are the connections for the oil tanks.

The machine shops now claim our attention—and fine departments they are, arranged within a few feet of the stocks themselves, but much nearer the water-side than the buildings to which we have previously referred. These were destroyed by fire in 1906, and when rebuilt, were placed in far more advantageous positions. In fact, the whole yards have recently undergone a gradual process of re-arrangement, and as a result of Mr. R. Saxton White's care and foresight, the various shops

vessel is made, and when we say that one crane can lift the largest piece from the door of the joiners' shops on to the vessel in the river, it will at once be seen what great thought must have been brought to bear in the re-arrangement of the various shops in the yard.

Now we walk round the stocks themselves. They slant sideways into that artificial river—the Tyne—for as it is to-day, it certainly is artificial. At Walker it bends on to the sea, and, as a consequence, in order to successfully carry out a launch, it is necessary that the boat when leaving the ways shall not have its stern pointed across to the opposite river bank, but somewhat down stream. When full, the stocks at Sir W. G. Armstrong, Whitworth and Company's works accommodate six vessels, and these can be built simultaneously. To-day, everyone of these stocks have an oil tanker being built upon them, and as can be seen from the illustration on the front page of this article, one at least is almost ready to be launched. When a large oil tanker leaves the ways, it can be said with safety that about

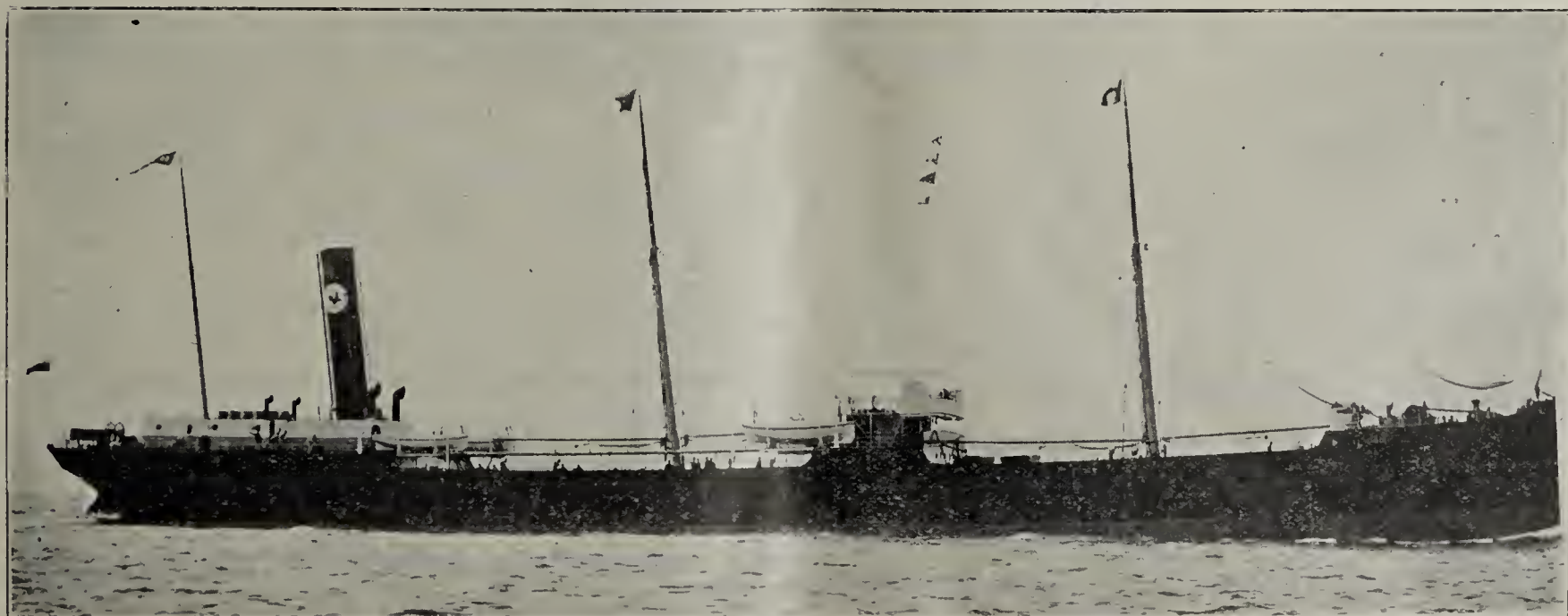
A Few of Sir W. G. Armstrong, Whitworth and Co.'s Oil Tankers.



THE S.S. "DAGHESTAN"—A FAMILIAR VESSEL AT BATOUM.



THE TANKER "CADAGUA," WHICH HAS SEEN SIXTEEN YEARS' CONTINUOUS SERVICE.



THE S.S. "LE COQ"—LAUNCHED THIRTEEN YEARS AGO.

six to seven months' good work have been put into her, for it is very rare that one is launched under that time, though work upon it is pushed forward as rapidly as safety will allow. And when one considers the enormous amount of labour necessary between the approving of the designs and the launching of the boat, such a performance must be considered as remarkably smart. To-day, all the six tankers on the stocks at Walker are in a fair way toward completion. Day by day they are assuming more of the shape they will have when in the water. The tall giant main stays, which reach an enormous height from the ground, are receiving their enormous sheets of iron, and a hundred hammers descending upon rivets speak loudly of the progress that is being made in their construction. Our photographs of the stocks, with the partially completed tankers upon them, taken as they were during one of the dull wintry days of last week, convey but a faint idea of the scene of bustling activity which is an everyday occurrence at the Walker shipbuilding yards, yet they will tend to give the reader an insight of the important branch of shipbuilding science which is associated with the building of oil tankers, and the great part played by Sir W. G. Armstrong, Whitworth and Co., in providing by far the largest quantity of English tonnage for the transport of oil. Their yards can with a certainty be called the home of the oil tanker.

The following is a complete list of the oil tankers constructed by Sir W. G. Armstrong, Whitworth and Co., since their first Atlantic bulk oil tanker was launched over twenty years ago:—

Name.	Gross Tonnage.	I.H.P.
Glückauf	2,297	992
Vorwärts	2,466	994
Minister Maybach	2,485	1,000
Willkommen	2,895	1,300
Ville de Calais	1,836	850
Oural <i>ex</i> Hans and Kurt	2,158	850
Paula	2,675	1,000
Ioannis Coutzis <i>ex</i> Caucase.. .. .	1,644	800
La Hesbaye <i>ex</i> Oevelgonne.. .. .	2,539	1,050
Gutheil	2,737	1,200
Elbruz	2,715	1,200
Suwanne <i>ex</i> Kasbek	2,707	1,200
Lux	1,635	750
Sophie	1,362	650
Genesee <i>ex</i> Darial	2,767	1,200
Russian Prince	2,717	1,200
Phosphor	2,023	900
La Flandre	1,979	900
Energie	2,765	1,200
Lumen	2,357	950
Elsie Marie	3,194	1,250
Burgermeister Petersen	2,794	1,200
Standard	2,765	1,200
Kura	2,372	1,200
Oranje Prince	1,868	800
Bear Creek	2,411	1,000
Beacon Light	2,763	1,200
Geestemünde	2,750	1,200
Ville de Douai.. .. .	1,872	850
Ewo	423	400
Helgoland	2,397	1,200
Brilliant.. .. .	3,162	1,550
Weehawken	2,784	1,350
Aral	2,826	1,350
Azov	2,332	1,000
Diamant	3,525	1,600
Mannheim	3,507	1,600
Lucerna.. .. .	3,242	1,550
Le Progres	449	440
Baku Standard	3,708	1,600

Name.	Gross Tonnage.	I.H.P.
Etelka	2,373	1,200
El Gallo	632	550
Cadagua.. .. .	2,394	1,200
Euplectela	3,918	1,750
James Brand	3,907	1,750
Tonawanda <i>ex</i> Lucigen	3,416	1,800
Le Coq	3,399	1,800
Snowflake	2,710	1,450
Georgian Prince	3,246	1,200
Mamed-hakh	552	360
Nerite	4,893	2,300
Cowrie	4,893	2,300
Borjom	2,874	1,750
Samarkand	976	800
Mechti	789	650
Rasoul	997	800
Usenia Manafoff	1,040	1,800
Trigonia.. .. .	1,667	1,000
Haliotis	1,659	1,000
Asia	1,168	900
Daghestan	2,818	1,500
Oriflamme	3,764	1,900
Luciline	3,765	1,900
Saxoleine	3,757	1,900
Strombus	6,030	3,100
Cardium	6,068	3,100
Bulysses.. .. .	6,069	3,100
Tiflis	2,816	1,500
Pinna	6,288	3,100
Makkavei	1,651	1,000
Khodoung	1,457	1,050
Kinsman	4,534	2,100
Rossija	3,983	1,900
Pure Oil	4,487	2,350
Tuscany.. .. .	4,006	1,900
Silverlip.. .. .	7,492	3,300
Lucigen	4,527	2,300
Cymbeline	4,505	2,350
Twingone	1,771	2,900
Singu	3,037	1,450
Beme	3,036	1,400
Nerite	2,042	1,250
No. C. 119	337	—
No. C. 158	337	—
No. C. 81	337	—
Hermione	4,500	2,350
San Cristobal	2,040	1,250
Oberon	4,895	2,600
Carpathian	4,645	2,600
Roumanian	4,645	2,600
Buyo Maru	4,820	2,600
Derbent.. .. .	3,020	1,800
Joyo Maru	4,895	2,600
—	4,700	2,600
—	4,200	2,450

BATOU PETROLEUM SHIPMENTS.

The following were the shipments of petroleum products from Batoum during the week ended March 29th, o.s. (in poods):—

	Illuminating Oil.		Other Products.	
	1907.	1908.	1907.	1908.
To Europe ..	1,475,000	—	231,000	276,000
To the East ..	141,000	131,000	5,000	1,000
To Russian Ports.	1,000	113,000	5,000	7,000
From 1st Jan. to 29th Mar. :—				
To Europe ..	4,963,000	3,272,000	2,418,000	2,148,000
To the East ..	3,001,000	3,912,000	17,000	19,000
To Russian Ports	1,005,000	1,025,000	34,000	17,000

BORE HOLES FOR OIL

Contracted for by

JOHN M. THOM,

Canal Works,

Patricroft, MANCHESTER.

CONTRACTOR TO H.M. GOVERNMENT.

THE LATE MR. COLIN R. STRONG.

AN APPRECIATION.

We deeply regret to announce the death at Naples, on the 4th inst., of Mr. Colin R. Strong, a gentleman well known throughout the oil trade, and one of the directors of the Anglo-American Oil Co.

As he still wanted some months to complete his 66th year, he cannot, even in this era of young men, be accounted old, and those who were most closely in touch with him know that, when at the end of November last he went abroad on a six months' holiday for rest and recuperation, he exhibited, despite some physical weakness, all the mental energy and acumen which have been the distinguishing features of his long and brilliant commercial career.

His physical condition and fitness is shewn by the fact that, so recently as August last, he spent a few days on a boating excursion on the river with the present writer—his contemporary in age and his sorrowing friend. During the brief outing he manfully took his full turn with the sculls and acquitted himself like the practised waterman that he was.

Yet, despite his premature removal and his perennial youthfulness in appearance and in spirit, he was one of the veterans of the trade, known and respected not only in the United Kingdom but over the whole continent of Europe, and perhaps even farther afield.

He was born in India in 1842, but, while yet a child, was sent to his parents' relations in this country for his education. In 1856 or 1857 he got his first situation with the famous sugar firm of Richardson in Edinburgh, and, after a few years in their employment, he joined the equally famous firm of James Young and Co., the pioneers of the paraffin oil trade, in the Bathgate Chemical Works, Bathgate.

When in 1864 Young's historical patent expired and paraffin oil works sprang up like mushrooms all over the Scottish shalefield, young Strong transferred his services to Messrs. John Watson and Sons, who, in 1865, established paraffin oil works in connection with

their coalfields at Bathville, a few miles from Bathgate.

It was in this connection that the writer, who had then just begun business in Glasgow, had the good fortune to make the acquaintance which subsequently ripened into lifelong friendship with the subject of this sketch.

In 1867 or thereabouts, Messrs. McLagan, Meldrum and Simpson, whose names were well known in the early days of the paraffin oil trade, started the Uphall Oil Co., and Mr. Strong was established in business in

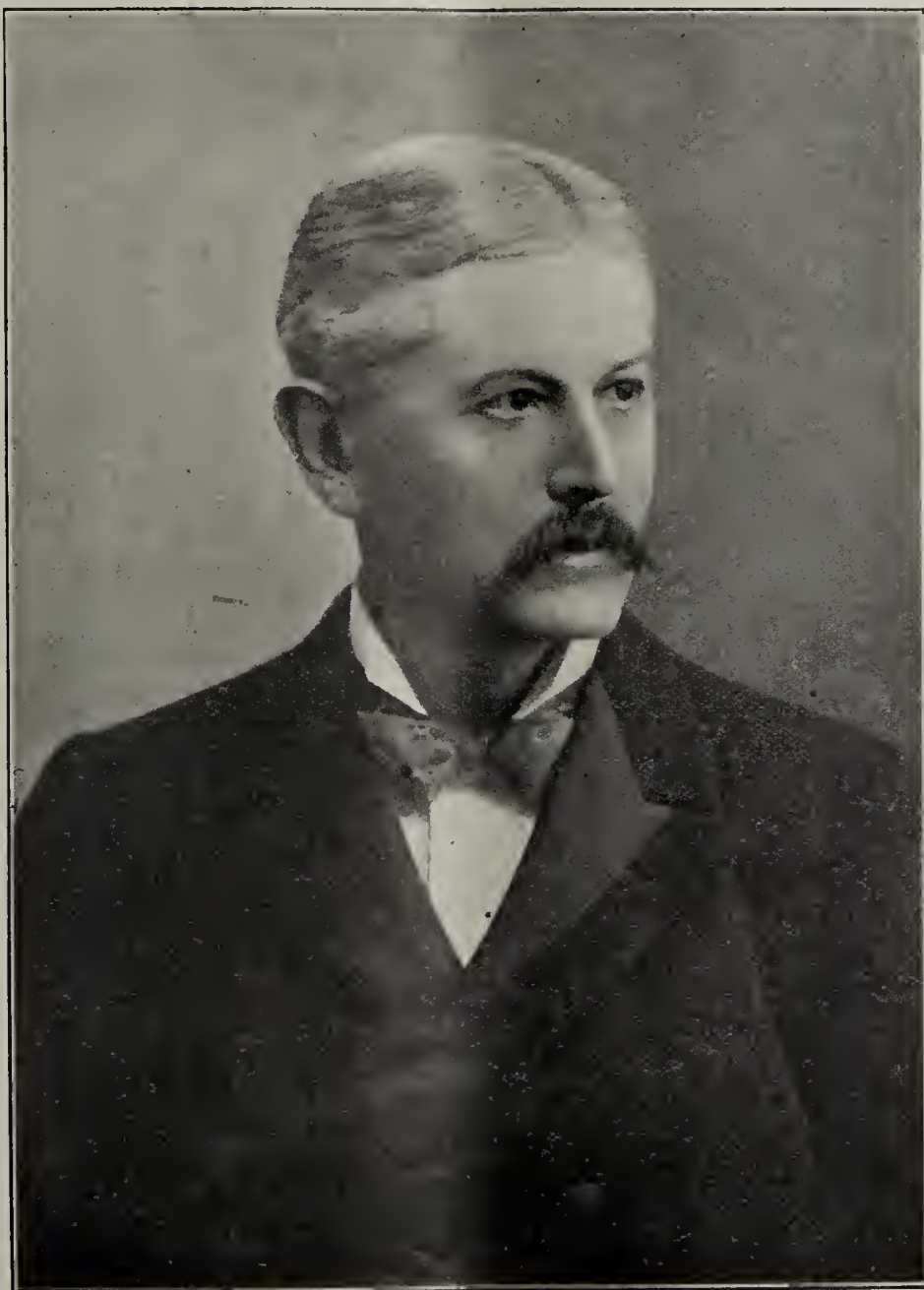
Glasgow as the agent of the new firm.

The new concern was magnificently organised under the magnetic personality of Alexander Birnie, another old Bathgate official, their products took a premier position on the market, and, largely through Mr. Strong's untiring energy, a vast and prosperous trade was established in the United Kingdom. But American petroleum made its appearance in steadily increasing quantities, and, the tide of prosperity which had attended the oil trade of Scotland having reached its flood, the ebb supervened.

With a view to enlarge the sphere of his operations, Strong took into partnership Alexander Birnie, the former manager of the Uphall Co., and under the title of Birnie and Strong

continued the agency for that company in Glasgow, while, taking himself off to London, he established a branch of his new firm in this city under the title of Colin R. Strong and Co. Trade was feverish and unsettled and the experiment was not successful, and on the death of Mr. Birnie, Mr. Strong returned to Glasgow where he resumed business under his own name.

Shortly afterwards he undertook the management of the sales department of the newly-established Broxburn Oil Co., and in 1880 or 1881, when the Thompson Bedford Co. resolved to establish a branch in this country, Mr. Strong terminated his connection with the Broxburn Co., and, taking up his abode in Manchester,



THE LATE MR. COLIN R. STRONG.

was appointed the first agent for the "T. and B." oils in the United Kingdom.

Since then the absorption of the Thompson Bedford Co. by the Standard Oil Co.—the establishment of the Anglo-American Oil Co.—Mr. Strong's appointment as manager and subsequently as a director of the latter company, and the uninterrupted success which, under his skilful management, has attended them, are known to all our readers and need not be repeated.

The deceased gentleman was a man of somewhat reserved character and undemonstrative manner, shy and careful in the selection of his friends, but constant and true to those whom he adopted.

Yet his general manner was so genial that all with whom he came into contact in the course of his dealings were so much impressed that they regarded him rather as a personal than as an ordinary business friend.

His sense of justice was keen and his business principles were untarnished by any selfish consideration, and the writer has known of instances in which he pursued the course which appeared to him to be right even when his own interests were imperilled.

Although the pressing demands upon his time left him no leisure for active political life, he was a genuine Liberal in principle and a member of the Reform Club, Manchester, and of the N.L.C., London.

His amusements were few and simple. In his youth an enthusiastic volunteer and an ardent cricketer, later he became smitten with the charms of the Thames and spent his leisure hours afloat on the bosom of the stream seeking the beauties of the "Mother of Rivers." In more recent years he devoted much time to photography, and his camera became the constant companion of his occasional holidays in the United Kingdom or in the lands of the Moors or the Pharaohs.

His taste in the selection of subjects and the manipulation of the camera were excellent, and the results were exhibited with much subdued satisfaction and running comments on the part of the artist to those friends whom he regarded as likely to appreciate his work.

In July, 1876, Mr. Strong married Miss Marion C. Bain, a member of a highly-talented and much-respected Edinburgh family, long resident in Bathgate. After many years of happy wedded life, Mrs. Strong died in December, 1904, without issue.

While Mr. Strong will be missed by a wide circle of friends, they will feel that it has been a privilege to have known him, and his memory will remain green for many a day.

PATENT.

Improvements in Governors for Petrol and Other Engines.—John Henry Winship Storey, Mechanical Engineer, of 383, Queen's Road, New Cross Gate, London, S.E., and Frederick Parker, Mechanical Engineer, of 13A, Cannon place, Brighton, Sussex. No. 4901 of 1907.

This relates to that class of governor for internal combustion engines wherein the supply of the explosive mixture to the cylinder is regulated according to the speed of the engine by suction on a piston valve, and consists in arranging the inlet to and outlet from the valve casing in direct line with each other so that the path of the explosive mixture is preferably at right angles to the axis of the valve and so that the course of the mixture is not diverted during its passage.

THE ROMANO-AMERICAN COMPANY.

AN EXPLANATORY LETTER.

In reply to the attacks which have lately been levelled against it in the Roumanian press, the Romano-American Co. has published an explanatory letter in the *Curverul Financiar*, of Bucarest. The letter reads as follow:—

"Dear Sir,—Several journals, in dealing lately with the Romano-American Co., have expressed opinions about our activity, which we consider unjust.

"The Romano-American Co. dates from July, 1904. The construction of the refinery was completed at the beginning of 1905, at which time it commenced to refine.

"Until the spring of 1907 the whole of the refined illuminating oil was exported.

"From that time we decided to place our products for sale in the interior of Roumania.

"The sale of illuminating oil at that time was controlled by the refineries of the country united in a cartel. We did not agree to join the cartel, as we thought we could sell our oil, thanks to a proper organisation, more economically than by the system of the cartel.

"Under such conditions we are able to reduce the price of oil to the consumers, and at the same time gain a reasonable profit, and also supply an oil of a better quality than has hitherto been sold on the home market.

"We believe that every manufacturer has a right of using this method of selling, *i.e.*, to supply his products direct to the consumers.

"In the course of the year, 1907, we have treated at our refinery 103,380 tons of crude oil. Of this figure 66,210 tons was our own production, and the remaining 37,170 tons were purchased from various producers. The average price which we paid for the crude oil was 37.40 francs per ton taken at the wells. The quantity of crude oil purchased by us represents 3½ per cent. of the total production of the country.

"In the preceding year, 1906, we purchased 22,870 tons at an average price of 32 francs per ton. None of these prices were forced; they were the normal market prices.

"As proof that the above-mentioned prices were not abnormal may be mentioned the fact that the average monthly production in 1907 was only 94,399 tons, whilst the total capacity of the refineries in Roumania was 120,000 tons.

"From the quantity of 103,380 tons of crude treated at our refinery we obtained 29,103 tons of illuminating oil. Out of this quantity we exported 20,082 tons, and sold in Roumania 7,125 tons; the remainder of 1,895 tons being left in stock.

"During the year we have taken part at public auctions for the supply of illuminating oil to various towns, offering the following prices:—

Botoshani	..	24.65	francs per 100 kilos., including tax.
Piatra-N	..	24.75	" " "
Vaslui	..	24.75	" " "
Iassy	..	21.00	" " "
Falticeni	..	21.25	" " "
Ploeshti	..	19.90	" " "

"We have not, however, succeeded in getting any of these contracts, as other competitors have offered prices lower than ours.

"We believe that the above data will be sufficient to throw full light on the question.

"(Signed) ROMANO-AMERICAN PETROLEUM CO."

NOTES FROM ALL QUARTERS.

RUSSIA.

Paraffin Scale.—During 1907 paraffin scale was produced at Baku from Tcheleken crude oil to the extent of 3,740 poods.

Nobel Bros. Transport Contracts.—Nobel Bros. have entered into contracts with Volga shipowners for the transport in bulk of 17,450,000 poods of petroleum oils from Astrakhan to various ports on the Volga and its tributaries.

The Opening of Navigation.—Navigation on the Caspian Sea was opened on the 9th of April, when some of the tank vessels of Messrs. Nobel Bros. and other shippers left Baku for Astrakhan. The vessels of the shipowners' syndicate stayed in port.

Riga Shipments.—During 1907 the shipments of petroleum products from Riga to foreign ports amounted to 370,057 poods against 513,156 poods in 1906. Lately there has been an increased demand for oil in Riga for export purposes, chiefly for Denmark, Belgium and France.

The Leasing of Government Lands.—A special conference is shortly to be held in St. Petersburg, at which will take part Government representatives and petroleum producers, to consider the question of the terms for the leasing out by auction of further petroliferous lands in the Baku district.

An Echo of the Water Shut-Off.—About 100,000 barrels (or 1,000,000 poods) of cement is used annually on the Baku district. The largest part of this quantity is used for shutting off the water in boreholes, and a considerable quantity is also used in the refinery district for foundations for tanks and machinery.

The Port of Petrovsk.—In view of the filling up of the local storage installations shipments of oils to Petrovsk from Baku were suspended in the middle of March. Loud complaints are made by shippers of the unsatisfactory condition of the port of Petrovsk, which in rough weather can be entered only with considerable difficulty.

Removing Storage Installations.—The shrinkage in the trade in petroleum products on the Russian home markets has rendered superfluous many of the storage installations. At Czaritzin, on the Volga, oil merchants are transferring some of their tanks to the centres of consumption in the interior, while the Mazout Co. propose to destroy an ambare of a capacity of 1,200,000 poods.

Caustic Soda Residues.—During 1907, 200,000 poods of the caustic soda residue obtained by the refining of petroleum oils were despatched from Baku. This article is gaining an increasing demand for soap making. The increase in the sale of this product is due to the continued high price of tallow and declining price of this substitute, which from 1 rouble 60 copecs per pood in 1907 declined to 1 rouble 30 copecs to 1 rouble 40 copecs in the beginning of 1908. There are now three firms in Baku producing this soap-making material.

AMERICA.

Important Illinois Deals.—It is stated that several important land deals have recently taken place in the Illinois field. In all, the properties which have changed hands during the past three months have involved a consideration close upon \$3,000,000.

The Kern River Field.—There is now considerable activity in the Kern River field of California, and several new concerns are about to engage in drilling. Contracts at present call for the delivery of 16,000 barrels daily from the members of the Independent agency in the field, and much of the activity at present is to keep the production up to this level.

Another Important Transfer.—Announcement is made in the *Oil, Paint and Drug Reporter* that J. M. Guffey Petroleum Co., of Texas, has purchased the Heywood Oil Syndicate's holdings at Lennings, La., the consideration being put at \$1,875,000. This acquisition gives the Guffey Co. an additional 300 acres of oil lands, a production of 32,000 barrels per day, and storage reservoirs for 20,000,000 barrels of oil.

A Significant Rumour.—It is rumoured from the Santa Maria field that the Graciosa Oil Co. has been sold to the Standard.

Increasing Production of the Gulf Coastal Fields.—The daily average of the production of the Gulf Coast fields for March was 34,000 barrels, as against 52,000 barrels for February. Everyone of the Texas fields shewed an increase in production for the month, prominent in this respect being the old Spindle Top field.

Mexican Developments.—Messrs. S. Pearson and Son, of London, who are taking so great a part in the Mexican oil developments, have recently, so it is reported, closed deals for the purchase of large tracts of land in the state of Tamaulipas, adjacent to the properties held by the Mexican Petroleum Co. Messrs. Pearson's refinery erected near Minatitlan is approaching completion, and some portion of it will soon be ready for working.

The Los Angeles Field.—This field has now developed into one of the largest in the Californian State, and at the present time is attracting great attention from most important interests associated with the industry. The production is steadily increasing, and that of the Union Oil Co. has reached such a figure that it can no longer depend upon the Associated Oil Co. to give it the facilities for transportation. The Union has now secured a franchise for the laying of a special pipe line so that an additional outlet may be found for its production.

ROUMANIA.

The Roumanian Parliament has sanctioned the expropriation of some land within the port of Braila for the purpose of laying a line of railway to a spot where it is proposed to erect a crude oil tank.

A Baicoi Property's Production.—The production of the Baicoi property held by Mr. Jean Ganz on behalf of a German syndicate, in March amounted to 185 tons, of which 70 tons was obtained from two hand dug wells and 115 tons from two boreholes.

Land Transfer.—Mr. Thomas Rucareanu has transferred to Mr. Heinrich Krebs, of Berlin, the concession possessed by him on a tract of petroliferous lands in the locality of Telega as well as a producing property with three hand wells. The price is 40,000 francs.

The Steaua Romana Issue.—It is reported from Berlin that the latest issue of 4,000,000 francs debentures of the Steaua Romana has been fully subscribed. The total capital invested in the Steaua Romana now amounts to 50,000,000 francs, of which 30,000,000 francs are in shares and 20,000,000 francs in debentures of various classes.

Consumers' Protest.—Consumers of liquid fuel in Roumania have held a meeting to consider the question of the high prices ruling for this product. It was decided to take concerted action to oppose the policy of the refiners in raising the price of fuel oil. The consumers threaten to go back to coal unless the price of liquid fuel is kept at a reasonable level.

Liquid Fuel on the Roumanian Railways.—Out of a total of 588 locomotives in use on the Roumanian railways, 472 are adapted for burning liquid fuel: the Urquhart burner is used for burning residuals; 370 locomotives are fitted with the Nolden burner used for the simultaneous burning of residuals and lignite. From 1st March, 1906, to 31st March, 1907, all the locomotives have consumed 101,092 tons of residuals.

Roumanian Tank Waggon Statistics.—The Roumanian State Railways have in circulation 1,546 tank waggons, of which 872 belong to private owners, but will ultimately become the property of the railways. Of the 872 private waggons, 795 are used for carrying residuals, 73 for illuminating oil and 4 for sulphuric acid. The total quantity of various oils carried by the Roumanian railways in the fiscal year 1906-7 was 600,371 tons, and the receipts on same amounted to 3,102,710 francs, making an average of 5.17 francs per ton.

LATEST QUOTATIONS OF PETROLEUM SHARES.

ENGLISH COMPANIES.

*This list is restricted to companies who have paid dividends or who are producers.

Company.	Capital Paid Up.	Value of Shares.	Latest Prices.
Assam Oil	£205,000	£1	1/8
Baku Russian Petroleum ..	£750,000 Ord.	£1	9d.-1/3
.. ..	£650,000 5 1/2% Pref.	£1	2/3-3/3
Bibi-Eybat Petroleum Co. ..			6/6-7/6
Californian Oilfields ..	£385,000 Ord.	£1	5 5/8-5 7/8
Commonwealth Oil Co. Pref	18/- paid up (Prem.)		1 1/8-1 1/8
.. ..	Def.. £1 fully paid		1 1/8-1 3/8
European Petroleum ..	£550,000 Pref.	£1	1/0-2/0
.. ..	£550,000 Ord.	£1	0/6-1/6
.. ..	£376,000 Deb.	£100	70-74
Russian Pet. & Liquid Fuel ..	£500,000 6 1/2% Pref.	£1	3/0 4/0
.. ..	£600,000 Ord.	£1	2/6 3/6
Schikhaieff Petroleum ..	£575,000 6% Pref.	£5	1/8-1 1/8
.. ..	£575,000 Ord.	£1	2/6-3/6
Shell Transport & Trading ..	£2,000,000	£1	45/0-46/0
.. ..	£1,000,000 Pref.	£10	10-10 1/4
Spies Petroleum Company ..	£312,500	10s.	9/0-10/0

SCOTCH COMPANIES

Supplied by Messrs. MACLEAN AND HENDERSON, STIRLING.

Company.	Capital Paid Up.	Value of Share.	Latest Prices.
Broxburn Oil Co., Ltd., Ord.	17/- pd	£235,000	£1
Do. 6% Cum. Pref.	£100,000	£10	£2 4s. 6d.
Burmah Oil, Ord.	£1,100,000	£1	£12 7s. 6d.
Do. Pref.	£250,000	£1	£4 3s. od.
Dalmeny Oil Co., Ord. (7 paid) ..	£37,800	£8 10s.	£1 6s. 9d.
Do. 5% Pref	£18,900	£7	£5 10s. od.
Oakbank Oil Co., Ltd., Ord.	£170,000	£1	£4 13s. od.
.. .. (17s. paid)			£1 8s. 9d.
Pumpherstons Min. Oil Co., Ltd., Ord.	£110,500	17s.	£12 10s. od.
.. .. (17s. paid)			
Do. 6% Cum. Pref.	£100,000	£10	£13 0s. od.
Tarbrax Oil Co., Ltd. Ord. (£1 pd.)	£38,350	£1	£2 18s. 3d.
Do. 6% Cum. Pref.	£35,000	£1	£1 8s. od.
Young's Paraffin Co., Ltd., Ord. ..	£452,808	£4	£3 15s. 6d.
Do. "B" Deb...	£150,000	£100	£170 0s. od.

DUTCH COMPANIES.

Company	Nom. Value in Roubles.	Quotations on April. 20th.	
		Lowest Roubles.	Highest Roubles.
Baku Naphtha Co.	100	492	495
Balakhany Naphtha Co.	250	—	—
Caspian Society	1,000	4,050	4,100
Mazout Co.	250	—	—
Melikoff, A. C.	250	—	—
Mirzoeff Bros	250	—	—
Naftalan Co.	250	—	—
Naphtha Co. "Kavkas"	250	—	—
Naphtha Trading Co., A. I. Mantacheff & Co.	250	157	158
Neft Co.	250	—	—
Nobel Bros.	5,000	11,150	11,200
.. ..	250	—	—
Rops and Co. V... ..	250	—	—
Russian Naphtha Co.	250	—	—
Society Mazout	250	—	—
Ter-Akopoff Co.	250	—	—
Tumaieff & Co., J. G.	250	—	—
Volga-Caspian Naphtha and Trading Co.	250	—	—
.. .. (Second Issue)	250	—	—

Company	Latest Quotations (per cent.)	Florins
Arnhemsche Petroleum Mij.	36 1/2	1,000
Aurora (Deb. 5%)	82 1/2	—
Campina Poiana Mij.	—	—
Dordtsche Petroleum Mij. (Pref.)	135	50
.. .. (Deb. 4 1/2%)	100 3/4	1,000
Gaboes	2 1/8	—
Holl. Rumeensche Petroleum Mij.	13	1,000
Int. Rum. Pet. Mij.	33	500
Java Petroleum Mij. (Ord.)	—	1,000
.. .. (Pref.)	21	—
Koninklyke Nederl. Pet. Mij. Shares	282	250-1,000
.. .. Share certificates	277	1,000
Mœara Enim Petroleum Mij.	138 1/2	100
.. .. 1-1,000 Oblig. 5	—	250-1,000
"Moesi Ilir" Petroleum Mij.	—	—
Nederl.-Rumeensche Petroleum Mij.	2 5/8	—
Nieuwe Ned. Petroleum Mij. And.	—	1,000
Oliebronnen in Hannover Mij.	50	—
.. .. (Deb. 5%)	90	—
Panolan Maatschappij Cert.	224	—
Perlak Petrol. Mij. (6% cum. pr. A.)	110 1/4	1,000
.. .. (Common)	—	—
Sumatra-Palembang Petroleum Mij	92 11/16	500
Tarakan Petrol Mij.	37 3/8	—
Zuid Perlak Petrol. Mij. (Pref.)	84 1/2	—

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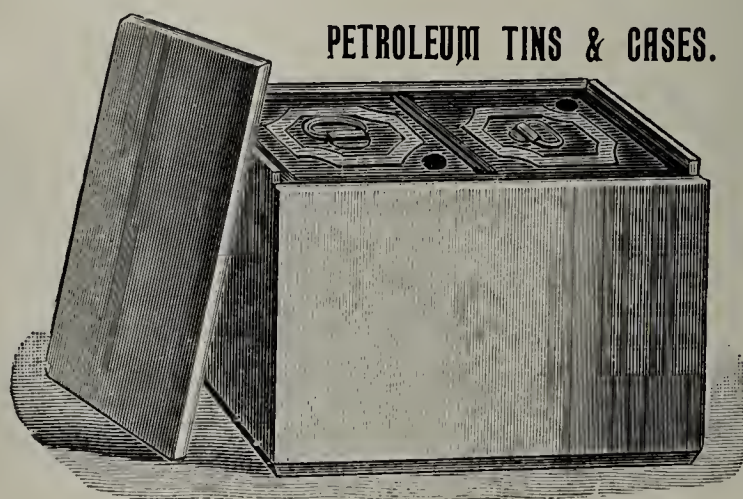
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A. WILLIAMS and H. J. TALL, Joint Managers

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THE
PETROLEUM REVIEW,

45, St. Mary Axe, LONDON, E.C.

American Office: 150, Nassau Street, New York.

SATURDAY, APRIL 25, 1908.

A LEGALISED PETROLEUM CARTEL FOR ROUMANIA.

FOR the first time in the history of the petroleum industry, a government has acknowledged the necessity for regulating the trade in petroleum products at home by means of a legalised cartel, for, as is recorded in this issue of the REVIEW, the Minister of Finance for Roumania has secured the unanimous passing of a law drafted with this end in view.

It is a well-known fact that in most countries the

petroleum industry, like the large majority of other industries, is based upon a combined arrangement entered into between the various enterprises for the purpose of regulating both trade and price, and that such arrangements have proved beneficial to the interested parties is conclusively shewn upon every hand. Take, for example, the case of England. Following upon the disastrous war of prices of a few years ago, an amicable understanding was arrived at between those concerns engaged in the oil distributing trade, and the result has been that prices have been maintained at a level which has left a reasonable margin of profit for all concerned, though perhaps not so great as one would expect.

In other parts of Europe a similar condition of things exists, and under the circumstances it does appear rather strange that the respective Governments have not, years ago acknowledged the important work played by cartels and accordingly placed them upon a basis of legalisation. No matter where we look we see how absolutely necessary it is that such cartels should be in existence as a means of regulating and preserving an industry, and whether we take the iron, coal or steel trades, almost the very life of the participating firms rests upon the friendly arrangement of a cartel.

The problem of bringing into being and legalising a cartel for an important and ever-increasing industry is, we admit, very difficult, and may-be this is the main reason why in the past our various Governments throughout Europe have withheld their hand from legislation in this respect. Now, however, plucky little Roumania has led the way, and the new law which will create a legalised cartel will be watched in working with the greatest interest, for it places the cartel for the petroleum industry practically upon the same basis as were the various sugar cartels in the countries where bounties were paid before the last convention--the quantity necessary for the home consumption is divided *pro rata* among the various refiners.

The new Roumanian cartel comes into being at a very opportune moment, and a perusal of the various articles under which it is formed will at once shew the great skill and care that has been brought to bear in drafting the new law. One thing we are pleased to note, and that is, that the Government have restricted their rights to interfere with the prices of oil charged by the refiners within a fixed limit, and thus the refiners will be able to conduct their business with a greater degree of security, while another important inclusion in the law is that the quantity of petroleum products for export is left quite free, and here the individual refiner is left unfettered.

The introduction of this new legalised principle will doubtless lead to the industry being placed upon a far more firm basis in Roumania than it has hitherto been, while at the same time it is bound to make a considerable improvement in the quality of the products themselves.

We have many times seen, especially in Galicia, how those engaged in the producing section of the petroleum industry have suffered to a very great extent by having to sell their crude oils to a refiner at the lowest possible price, and at a time when the refiner was commanding

a very good market and highly remunerative prices for the refined products, and we have also seen, especially in the case of Roumania, that whereas the producer receives a very handsome profit, the refiner has worked for months to incur nothing but losses.

On many occasions we have shewn that there is only one country in the petroleum producing world where there is established a certain regular ratio between the refined products and the crude oil prices, and this is in the United States. Such advantageous conditions are due to the perfect organisation of the Standard Oil Co., which is able to pay its just proportion to the producers and keep a constant balance between the prices of the crude and the refined product. The result of this has been that production has been stimulated, and the American industry has risen to the premier position of oil-producing countries in the world.

In European producing countries there is no such organisation, and consequently there is only one way of preserving the industry from periods of abnormal or perhaps ruinous prices, and keeping the industry upon a basis of solidity, and that one way is through the medium of the Government itself which has a duty to discharge to the petroleum industry. It should take upon itself the provision of proper legislation to deal with the problem, and by imitating the methods of the Standard Oil Co. in the States, to a certain extent assist to stimulate the production of crude oil on the one hand, and the profitable refining and marketing of the products on the other. Under the new *régime*, it is a foregone conclusion that the petroleum industry of Roumania will be considerably improved in its position, and that it will now, even more than in the past, expand and be profitable for all concerned.

THE SCHIBAIEFF PETROLEUM COMPANY, LIMITED.

The report of the directors of the Schibaieff Petroleum Co., Ltd., which has been issued during the present week, states that the accounts of the Russian company, S. M. Schibaieff and Co., shew a loss for the year of £53,835, making a total debit balance of £76,697, against which the English company has a credit balance of £73,509. The directors regret that the work in Baku was again seriously interrupted by strikes. During the twelve months covered by the accounts, the work on the oil fields and in the refinery was at a standstill for over two months, and besides the general expenses, which continued as usual throughout this period much additional expenditure was necessarily incurred. As a result of the prolonged interruptions of baling and drilling operations, the oil wells frequently got flooded with water or plugged with sand, the reinstatement involving considerable expenditure in time and money. During the period under review the oil fields shewed a considerable profit, but owing to prices in the interior of Russia being below the Baku parity, the refinery and distribution departments of the business made a heavy loss. The London accounts shew:—Balance brought forward from last account, £63,067. Add dividend on S.A.I.C. shares to December, 1906, £10,925; interest on deposits and transfer fees, £106; refund of income tax, £1,481. Deduct income tax, £2,050; depreciation of furniture, £20. A complete report of the general meeting of the shareholders will appear in our next issue.

A NEW ROUMANIAN LAW FOR DIVIDING THE HOME CONSUMPTION BETWEEN THE VARIOUS REFINERIES.

IMPORTANT GOVERNMENT STEP.

At a recent sitting of the Roumanian Chamber of Deputies, the Roumanian Government introduced a Bill to regulate the production of illuminating oil, the division of the home consumption of illuminating oil among the various refineries and the selling price for the home trade.

The measure met with the approval of the members of the Government, and was unanimously agreed to.

Below is the full text of the new law:—

CHAPTER I.

DIVISION OF THE CONSUMPTION.

Article 1.—The Government is empowered by this law to undertake the distribution of the total consumption of illuminating oil among the existing refineries and those which may be established.

Article 2.—The distribution is effected on the basis of the producing capacity of each refinery. The producing capacity is determined by the quantity of crude oil which the refinery is capable of treating in course of a year.

Article 3.—The refineries which are not able to treat more than 40,000 tons of crude oil per annum will, in the allotment of their quota, receive an addition of 100 per cent., as against the refineries which treat more than 40,000 tons per annum. Those refineries which are not capable of treating more than 10,000 tons per annum are, in respect of their producing capacity, allowed an addition of 400 compared to the refineries capable of treating more than 40,000 tons of crude oil per annum.

Article 4.—Refineries which are unable to produce lamp oil of the regulation quality are strictly prohibited.* Existing refineries which do not satisfy these requirements shall be closed, and their working shall not be permitted until they have been provided with the necessary apparatus for producing lamp oil in accordance with existing or future special regulations.

Article 5.—Every year, in April, the Minister of Finance shall submit to the Council of Ministry a report on the division of the total consumption among the existing refineries which are able to produce regulation oil. After the approval by the Council of Ministers of the distribution, the Minister of Finance informs each refinery of the part of the consumption that has been allotted to it.

The surplus production is dealt with in the following manner:—When it is exported the refinery must prove this exportation by the production of the certificates of consignment and loading, as well as by any other proofs which may be required by the Ministry of Finance. If the surplus is not exported it has to be stored in a separate warehouse or tank of the refiner under the control of the controlling agent placed by the Ministry of Finance at each refinery for the collection of the Government tax and communal fund.

* Regulation for the manufacture and sale of products of the petroleum refineries, promulgated by Royal Degree No. 3820 of 1st December, 1892; modified by Decree No. 2386 of 8th June, 1893, and Decree No. 4344 of 22nd December, 1893.

Article 6.—If a distillery ceases working, or if it cannot or wishes not to provide for home consumption its proportional part according to the allotment made by the Government, the other refineries have to supply it in its place, each of them in proportion to its share in the total consumption.

The surplus quantity arising from such cases, as well as the surplus arising from an increase in consumption estimated at the beginning of the financial year, shall be allotted in the manner indicated in Articles 1, 2 and 3, and the share of each of the distilleries shall be communicated by the Minister of Finance in writing to each one.

CHAPTER II.

SELLING PRICE.

Article 7.—The Government fixes the maximum price at which the refineries must sell the illuminating oil.

This price, calculated at the issue of the oil from the refinery, is fixed per 100 kilogrammes on the following basis:—A figure shall be fixed between 3 francs 50 centimes and 4 francs 50 centimes representing the cost of refining and the refiner's profit; to this figure will be added the average price of crude oil delivered to the refinery. The total of these two figures will form the maximum selling price, which will be binding on all the distilleries.

Article 8.—This price is determined in course of the month of April for the following three months, and will be maintained as long as the average price of crude oil remains the same. If after the expiration of these three months the average price of crude oil changes, either increasing or decreasing, the maximum selling price of illuminating oil shall be modified accordingly.

Article 9.—The price as well as the changes in price are decided by the Council of Ministers upon the recommendation of the Minister of Finance, and shall be notified by the latter to the refiners.

CHAPTER III.

PENALTIES.

Article 10.—The owner of the refinery, which in course of a year will deliver for consumption a larger quantity than the quota indicated to him by the Minister of Finance, shall be punished by a fine representing a hundred times the value of the oil which he delivered in excess for consumption.

The Agent of the Ministry of Finance attached to the refinery which committed the breach of the law shall be dismissed and condemned to two years' imprisonment and the loss of the right of occupying any public post.

The proprietor of the refinery committing the same breach in two consecutive years shall be condemned to the fine above-mentioned, the closing of his establishment for a period of three months and the loss of one quarter of his annual quota in the consumption for the year during which the breach has been committed.

Article 11.—Whoever shall issue for consumption an

illuminating oil which will not satisfy the regulation requirements shall be punished by a fine of from 2,000 to 5,000 francs.

In case of repetition of the offence he shall be punished by double that fine, and upon a second repetition, in addition to paying a double fine, his establishment shall be closed.

The agents of the Government who, whilst being in a position to control the quality of the oil, will tolerate breaches of the law shall be dismissed, and shall not be able to occupy public posts.

Article 12.—Whoever shall mix residuals with benzine and issue this mixture for consumption as illuminating oil is to be condemned to a fine of 5,000 to 10,000 francs and three months' imprisonment.

In case of repetition of the offence, in addition to this fine and imprisonment, his establishment, whoever it may be, will be closed definitely.

Those who will denounce these frauds will receive 75 per cent. of the amount of the fines which will be paid to the State.

Article 13.—The owners of refineries who will sell at a price higher than the maximum price fixed by the Government shall be punished by a fine of from 2,000 to 10,000 francs and three months' imprisonment.

In case of repetition, the fine shall be double, and with each fresh repetition of the offence the fine shall be doubled in comparison with the fine paid previously.

Article 14.—The penalties prescribed by this law shall be imposed:—

(1) As regards dismissals, by the Ministry with which the guilty official is connected.

(2) In regard to fines, by the Minister of Finance on the basis of the official report on the committal of the offence; in this case the one condemned has the right to appeal to a Court of Justice within 15 days from the date of communication to him the approved report. The tribunal decides the case promptly and definitely, without the right of further appeal.

(3) As regards punishment by imprisonment and the loss of right to occupy a government post, the Minister will hand over the guilty parties to the tribunal which will pronounce itself promptly, with the right of appeal.

CHAPTER IV.

PROVISIONS FOR SALE IN RETAIL.

Article 15.—In case when the refiners will not themselves construct tanks for storage installations for illuminating oil at railway stations and in ports, in order to extend the consumption and to place the oil at the disposal of the public at a cheap price, the Minister of Finance is authorised to order the construction of such tanks at the expense of the State, of the type of the tanks constructed by certain refineries before the coming into force of this law. For this purpose the Minister of Finance will demand the necessary credits in accordance with the law on the general account keeping of the State.

The rent to be charged by the State for the tanks constructed by it shall represent only 5 per cent. interest on the sum invested and 5 per cent. for amortisation.

Article 16.—All depôts created either before or after

the promulgation of this law by refiners or by the State are obliged to supply to every buyer up to a minimum quantity of a barrel of 150 kilogrammes of illuminating oil; they have the option of selling also in smaller quantities.

TEMPORARY PROVISIONS.

Article 17.—This law shall be applied at the latest on the 1st October, 1908. The first allotment of the consumption, fixed in accordance with the provisions of Chapter I., and the first price fixed for three months in conformity with the provisions of Chapter II, shall, as an exception, be fixed during the month which will precede the putting into force of the law.

THE GULF COASTAL FIELDS DURING MARCH.

Latest advices from America state that the production of the Jennings, La., field proved a conspicuous feature of developments in the Gulf Coast region during March, surpassing the record of other districts. The yield of the Jennings wells for the month is placed at 557,500 barrels, while the output of other Louisiana fields is estimated at 45,130 barrels, a total of 602,630 barrels for the State. South-eastern Texas contributed 1,061,350 barrels, bringing the aggregate for the region to 1,663,980 barrels, against 1,497,950 barrels as the total for February. Every field in the Texas end scored an increased production last month, the greatest gain being credited to Spindle Top. The Anse la Butte district was the only one in Louisiana to record a diminished output. The total movement and consumption of the Gulf Coast region for March is estimated at 949,814 barrels, distributed as follows:—Rail and port shipments, 769,814 barrels; refinery consumption, 150,000 barrels; field consumption, 30,000 barrels. The February total was 977,113 barrels. Statistics on field operations shew completions of 82 wells, of which 61 were successful, contributing a new daily production of 25,375 barrels. The average per producing well is raised to 416 barrels, against 234 $\frac{3}{4}$ barrels as the average for February. Further declines have been recorded in crude prices, ranging from 2 to 5 cents, which are attributed to the increased production last month, the heavy surplus carried over from the previous month and the fact that the fuel oil demand of Northern Texas is being largely supplied by Oklahoma crude and residuum.

ENGLISH PATENT.

Improvements in Oil-Burning Furnaces.—Thomas Charles Mason, of 975, West 32nd Street, in the City of Los Angeles, in the County of Los Angeles, and State of California, U.S.A. No. 13166 of 1907.

This relates to means for effecting complete combustion of oil wherein air flowing in a regulated stream through passages therein is raised to a high temperature before reaching a combustion chamber, said combustion chamber having a burner within the front end near the upper part thereof, said air passages converging into one transverse flue having a discharge of curved form and of decreasing cross sectional area delivering the stream of heated air into the lower part of the combustion chamber beneath the oil burner therein, in which combustion chamber the whole of the combustible constituents of the oil are burnt and issue from as a short flame of great intensity analogous to a blow-pipe flame.

THE GROSNY REFINING INDUSTRY IN 1907.

In 1907, the refining of Grosny crude oil was concentrated in the two largest local refineries of the Vladicaucasian railway and the Akhverdoff Co. respectively. The Uspiech refinery and the refinery of the Kasbeck Syndicate (late Nadejda) were practically idle throughout the year, their storage installations only being utilised by the exporting firms. This could not fail to influence unfavourably the total turnover of the refining industry. The quantity of crude and other materials treated by Grosny refineries in 1907 compared to 1906 was as under:—

	Refinery of Vladicaucasian Rly. Poods.	Refinery of Akhverdoff Co. Poods.	Total in 1907. Poods.	Total in 1906. Poods.
Crude oil ..	18,832,993	8,634,222	27,467,215	29,602,159
Gasoline ..	2,610,740	884,000	3,494,740	4,633,598
Ligroin ..	140,049	—	140,049	—
Total ..	21,583,782	9,518,222	31,102,004	34,235,757

The output of various products by the Grosny refineries in 1907 was as under:—

	Refinery of Vladicaucasian Rly. Poods.	Refinery of Akhverdoff Co. Poods.	Total in 1907. Poods.	Total in 1906. Poods.
Kerosene distillate	1,246,224	869,881	2,116,105	2,524,597
Benzine ..	1,285,567	740,222	2,025,789	1,770,423
Ligroin (fuel benzine) ..	717,740	245,474	963,214	2,268,496
Gasolene (used for re-distillation) ..	2,644,918	889,589	3,534,407	4,146,227
Residuals ..	14,821,481	5,609,920	20,431,401	22,326,729
Loss, etc. ..	547,498	753,782	1,282,230	1,199,222

The exception to the general decline of the output is only benzine distillate, which shews an increase against 1906, due probably to the high prices which were ruling for benzine. Another noteworthy fact is that the decline by more than half of the output of ligroin (fuel benzine), which shews that in the past year distillation was carried out in a more rational manner with the object of increasing the yield of the more valuable products at the expense of the intermediary products, especially of ligroin.

The largest part of the benzine distillate was sent off from Grosny in an unrefined condition. Benzine refining has not yet made much progress in Grosny owing to lack of special rectifying plant at the local refineries, and without rectification refining is useless. This year only the first refinery was established in Grosny for the treatment of benzine distillate.

The refining of kerosene proceeded in a normal way, as will be seen from the following figures:—

	Refinery of Vladicaucasian Railway. Poods.	Refinery of Akhverdoff Co. Poods.	Total in 1907. Poods.
Output of:—			
Refined kerosene ..	1,211,683	799,067	2,010,750
„ benzine ..	5,153	42,408	47,561
Chemical used:—			
Sulphuric acid ..	5,618	7,370	12,988
Caustic soda ..	2,867	2,325	5,192

The kerosene was made of two qualities, the ordinary export grade (by the Akhverdoff Co. only) and the Meteor brand. The refinery of the Vladicaucasian Railway manufactured kerosene of the Meteor brand only, but sold it at the same price as Baku export kerosene, whilst the same oil was sold by other refineries at double the price.

The benzine distilled was also produced in two qualities:—No. 1, light, of a specific gravity of 0.710, and No. 2, heavy, of a specific gravity of 0.723 and 0.725. The last-mentioned product was sold by the Akhverdoff Co. at 1 rouble 65 copecs per pood, and by the railway refinery at the ridiculously low price of

46 copecs per pood, which, as might have been expected, gave rise to a great deal of speculation.

The quantities of various petroleum products forwarded from the Grosny district in 1907 were as under:—

	From the Refinery of the Vladicaucasian Railway.	From the Refinery of the Akhverdoff Co.	Total.
Crude oil ..	—	1,745,831	1,745,831
Refined kerosene ..	1,165,171	780,190	1,945,361
Kerosene distillate ..	83,701	—	—
Benzine ..	1,900,746	613,233	2,513,979
Refined benzine ..	—	39,944	39,944
Residues ..	14,995,578	4,802,229	19,797,807
Motorine ..	13,374	—	13,374

The bulk of the residuals, including the whole of the output of the refinery of the Vladicaucasian, was taken up by the railway for fuel purposes.

BAKU PRODUCTION DURING MARCH.

The total production of crude oil at the Baku oil fields during March (o.s.) amounted to 38,368,398 poods, of which 10,767,129 poods were obtained from the Bebe-Aibat field. Spouters at Bebe-Aibat yielded 704,933 poods. There were no spouters in any of the other fields.

The production of the leading firms in March was as under:—

	Poods.
Nobel Bros. ..	6,000,000
Caspian and Black Sea Society ..	3,000,000
Baku Naphtha Co. ..	2,100,000
Caspian Society ..	2,000,000
Mantascheff and Co. ..	2,000,000
Pitoeff and Co. ..	1,300,000
Aramazd Co. ..	1,200,000
Nagieff ..	1,100,000
Moscow-Caucasian Co. ..	1,100,000
Bibi-Eybat Petroleum Co., Ltd. ..	900,000
Russian Naphtha Co. ..	900,000
Schibaieff Petroleum Co., Ltd. ..	900,000
Russian Petroleum and Liquid Fuel Co., Ltd. ..	900,000
Baku Russian Petroleum Co., Ltd. ..	800,000
Zoubaloff ..	800,000
Neft Co. ..	700,000
Naftalan Co. ..	700,000
Ter-Akopoff ..	600,000
Shikhovo Co. ..	500,000
European Petroleum Co., Ltd. ..	500,000

PRODUCTION OF ENGLISH COMPANIES IN RUSSIA.

BAKU RUSSIAN PETROLEUM Co., LTD.—The production for the week ended April 11th was 193,000 poods, or 3,111 tons; and for the week ended April 18th was 206,000 poods, or 3,321 tons.

RUSSIAN PETROLEUM AND LIQUID FUEL Co., LTD.—The production for the week ended April 11th was 195,000 poods, or 3,144 tons; and for the week ended April 18th was 194,000 poods, or 3,128 tons.

SPIES PETROLEUM Co., LTD.—The output for the week ended April 12th was 306,040 poods, or 4,936 tons, of which fountain No. 5 well yielded 172,705 poods, or 2,785 tons. The production for the week ended April 19th was 293,905 poods, or 4,470 tons, of which the fountain in No. 5 well, on plot Baskakoff, gave 163,855 poods, or 2,642 tons. This fountain still continues to spout, the production for April 20th being 22,610 poods, or 364 tons. The total production from this fountain to the 20th inst. was 1,930,375 poods, or 31,135 tons.

THE EUROPEAN PETROLEUM Co., LTD.—The production for the week ended April 12th was 115,689 poods, or 1,865 tons; and for the week ended April 19th was 117,066 poods, or 1,887 tons.

THE BURMAH OIL COMPANY, LIMITED.

ANOTHER PROSPEROUS YEAR.

The report of the Burmah Oil Co., Ltd., for 1907, to be submitted to the meeting of shareholders at Glasgow, next Wednesday, states that the net profit, including £26,344 brought forward from 1906, amounts to £608,095. The directors now propose that there be placed to general reserve £200,000 (making a total of £540,000 at credit of this fund), and they further recommend a final dividend on the ordinary shares of 1s. 6d. per share (equivalent to 15 per cent. per annum from 30th June to 31st December, 1907), free of income-tax, together with a bonus of 3s. per share, free of income-tax, making 30 per cent. for the year, and leaving to be carried forward £30,002. The satisfactory condition of the oil trade generally, and the higher range of prices of all petroleum products during 1907, have contributed to make the year a prosperous one. The net profit shews an increase of £219,000 compared with 1906. The policy of prospecting for fresh oil-bearing territory in Burmah has been carried on with unabated vigour, and the directors are pleased to report that, in one of the new districts being tested, encouraging results have recently been obtained, which point to the probability of a considerable tract of valuable oil-bearing land being added to the company's holdings. Development work in the older territories has continued of a satisfactory nature, and supplies of crude oil have been ample for all requirements. Cost of all development work and expenditure on fields abandoned during the year have been written off, and £85,000 has been added to the field reserve account, making a total of £170,000 at the credit of that account. The increase of investments account is mainly represented by the expenditure during the year on operations in Persia. So far no success has attended these, and unless satisfactory results are shortly obtained this enterprise will be abandoned. A substantial profit has been made on part of the investments realised during the year, which has been applied in writing down the cost of the remaining investments. In addition, the directors consider it advisable to write down the investments by a further £10,000. Satisfactory progress has been made with the laying of the main pipe line for the conveyance of crude oil from the fields to the refineries, and up to 31st December last, 122 miles out of the total of 275 had been laid. Between 1st January and 31st March a further 114 miles have been laid, and it is anticipated that the line will be in full working order before the end of the present year. The Navy fuel works were completed about the middle of the year, and the increase on the refineries account is principally due to the final expenditure on this important scheme. The amount—£67,979—written off for depreciation on refineries account is on a liberal scale. Important additions have been made to the company's depôts and distributing installations in India, and all its tankers, tank installations, etc., have been maintained in an efficient condition. £55,618 has been provided for depreciation on these. During the year £42,150 of the

five per cent. terminable debentures have been repaid, and the others are being paid off as they fall due. The kerosene oil trade in India continued in a very healthy condition throughout the year, prices being well maintained, and consumption shewing a steady increase. So far the outlook for the current year is favourable, all the company's products continuing to go steadily into consumption at satisfactory prices. In pursuance of the resolution passed at the annual general meeting held on 26th April, 1907, payment has been made to those directors who were not remunerated otherwise than by their ordinary directors' fees of an extra sum of £200 each for their services for the year 1906.

AMERICAN INTEREST IN CANADIAN PETROLEUM FIELDS.

Mr. W. O. King, oil expert, of Muncie, Ind., in a letter to the *Canadian Oil Derrick*, says:—"The Canadian oil fields are the only bright and shining spots on the North American continent that appeal to the American oil operator and investor to-day, with a much higher price for crude oil than is paid for oils of the same grade in the United States, a government bounty of 52½ cents a barrel, which not alone guarantees the price of the oil, but is a government protection to the industry. There is an oil territory 70 miles long traversing north-easterly through the counties of Essex, Kent and Lambton, into the eastern edges of Middlesex and Elgin, these containing many pools of oil, as well as both shallow and deep territory. During the present lull in business conditions in the oil fields of the United States, many American operators have invaded the Canadian fields, and with the coming of good weather and the season when oil operators get busy, there will undoubtedly be a rush of American operators to those newer fields." He adds that the money markets will play an important part in any general renewal of the oil industry in any territory. Bankers, he says, are not keen for any kind of securities at this time, but good oil stocks and securities have stood up remarkably well during the financial flurry.

TENDERS FOR OIL FOR THE AUSTRIAN RAILWAYS.

The Austrian *Lieferungswesen* of the 1st, 9th and 12th April contain particulars of calls for tenders for the supply to the Directorates of State Railways at Olmütz, Linz, Stanislau, Krakau, Lemberg, Innsbruck and Villach, of quantities of refined petroleum, mineral lubricating machine oil, turpentine, mineral lubricating oil for carriages, linseed oil, whale oil, etc., for the period from 1st July, 1908, to 30th June, 1909. Tenders must reach the "Staatsbahndirektion" at the above-mentioned places by noon on the 30th April, where also specifications may be obtained on payment of postage.

The *Lieferungswesen* containing further particulars, may be seen at the Commercial Intelligence Branch of the Board of Trade, 73, Basinghall Street, London, E.C.

DEATH OF MR. WIGHAM RICHARDSON.

We deeply regret to record the decease of Mr. Wigham Richardson, which sad event took place in London last week. As our readers will be aware, Mr. Wigham Richardson was one of the principal shipbuilders on the Tyne, and one of the heads of the firm of Messrs. Swan and Hunter and Wigham Richardson, Ltd.

Mr. Richardson was born at Torquay in 1837, and, having received his education at Newcastle, was apprenticed to the late Mr. Jonathan Robson, a builder of tugs at Gateshead. Afterwards, he came to London University, and, returning to Newcastle in 1858, began his professional career at the works of Messrs. R. and W. Hawthorn as a marine engine draughtsman. In 1860, when only 23 years of age, he purchased a shipyard on the Tyne, and founded the firm of Wigham Richardson and Co., which was afterwards, in 1903, amalgamated with that of Messrs. Swan and Hunter, Mr. Richardson's neighbours at Wallsend, and to-day so well known as one of the firms in the construction of oil tankers.

Mr. Richardson was elected, in 1890, president of the North-East Coast Institution of Engineers and Shipbuilders. He was always fond of travel, and journeyed much in Poland and Russia, the Crimea, Greece and Turkey. He was a good deal in Italy in connection with shipbuilding business, and took a considerable part in the development of that country's mercantile fleet. He studied architecture and built houses, and was keenly interested in the higher branches of engineering, political economy, sociological problems, liquor laws, and history.

NEW COMPANY.**British Consolidated Oil Corporation, Limited.**

Registered with a capital of £200,000, in £1 shares, to acquire and hold shares, stocks, debentures, debenture stocks, bonds and other securities held, issued or guaranteed by any company carrying on business in the U.S.A. or elsewhere; in particular, to acquire, hold and deal in or with the share capital of the Maine State Oil

Co., Guthrie Oil Co., and Penna Mining Development and Operating Co., all incorporated under the laws of the State of California, U.S.A.; to take over work and develop the lands, rights, assets and interests owned or controlled by E. P. Antron, of California; to explore or prospect for petroleum, coal, asphalt, guano, and natural gas; to test any petroleum wells, or oil, coal, gas or other borings; to build, construct, equip, work, manage or control public works and conveniences of all kinds in the Republics of America or elsewhere; to adopt an agreement between E. P. Antron and H. A. Weltner (for the company), and to carry on the business of oil refiners, manufacturers of by-products from coal and petroleum, chemical manufacturers, chemists, miners, engineers, general merchants, etc.

Minimum cash subscription, 10 per cent. of the shares offered to the public. The first directors (to number not less than three nor more than seven) are to be appointed by the signatories. Qualification (except first directors), £500. Remuneration, £100 each per annum (chairman, £150) and 5 per cent. of the net profits in each year after deducting debenture interest.

AMERICAN EXPORTS OF PARAFFIN WAX.

In the following table are given the amounts of paraffin wax that were exported from America during February of this year as compared with February, 1907, the quantities being pounds:—

EXPORTS DURING FEBRUARY.

Exported to—	1907.	1908.
United Kingdom	9,610,335	12,578,776
Belgium	2,280	49,568
France	24,470	46,156
Germany	147,802	295,705
Italy	2,027,005	540,561
Netherlands	536,468	108,408
Other European Countries ..	510,270	587,961
Central American States and		
British Honduras	111,724	154,133
Mexico	1,311,563	1,227,409
South America	116,468	40,052
Japan	1,162,715	388,372
British Australasia	417,022	62,909
Other Asia and Oceanica ..	1,322,527	341,278
British Africa	410,460	193,682
All other African Countries ..	308,890	—
Other Countries	1,916	1,420

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Refiners of Indian Territory and Texas Petroleum.

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OUR AMERICAN LETTER.



A COMPREHENSIVE REVIEW
OF THE LATEST
DEVELOPMENTS.

PITTSBURG, April 7th, 1908.

There is but one county in the lower South-west that is prominent in furnishing new production at the present time. This county is completing more wells than any other, and their average production is higher than in any other development. The county has three distinct pools, and all capable of increasing their production.

Of the three developments, the Follansbee pool is the newest and best. Better producers have been found in that territory than in either the Hollidays Cove or the Wellsburg development. During the past few days the last-named development came to the front with three good producers. The location of these three wells are in the north end of the narrow streak running north and south, and all are located in advance of development, and have advanced the producing lines. This development up to the present time has been a very narrow streak, only a few locations wide, and when there was an effort made to go outside of the "belt" dusters followed.

The best producer recently found in the Follansbee development was drilled in on the La Belle iron property. It was the La Belle Company's No. 4, and had an initial production of 30 barrels an hour. There are now 10 producing wells in the Follansbee pool, and the production is close to 1,500 barrels a day. The Hollidays Cove pool is next in point of production and the Wellsburg pool is third. The three pools have a production of close to 2,500 barrels a day.

The success attending operations in Brooke county has very naturally stimulated development work, and an active campaign is now on and will become more lively when the weather conditions and the roads are improved. It is shallow drilling, and the wells can be drilled quickly and at much less expense than in many other localities.

In many parts of the lower south-west there are promising indications of an early resumption of active operations. In a number of the fields that have been idle for some months, new locations have been made and rigs now building. Some of the prospective work is in strictly new territory and of the wildcat kind. There is an evidence of new work in the oil fields that have not been fully developed. Light producers are all that can be expected from old territory. It is quite probable that more old territory will be drilled over this year than last, and it was a feature all through the past summer.

With the return of spring there is more drillable territory in sight than at the same time last year. With Brooke county undefined, Roane county capable of furnishing room for more wells and a large undeveloped acreage in Lincoln county, operators will have a fairly good chance to push the drill.

With a fair degree of success, the developments named should supply considerable new production, but it is not at all likely that they will meet the increasing demand for high grade crude or be able to supply new

production to meet the decline in the old fields. There never was a time in the history of the eastern fields when producers held on to their old wells with so much tenacity.

While there is quite a demand for settled production, owners have placed the asking price at a figure so high that those who would be purchasers decline to invest. The scarcity of new producing territory makes producers hesitate to let go of the old, for there is very little hope for securing new.

For a number of years efforts have been made to find new producing territory in the lower South-west, and with the exception of Roane and Lincoln counties very little has been discovered. It is quite certain that the discovery of congested pools will be the feature this year as was the experience of a year ago. New and prolific fields are not probable.

In a few of the deep sand districts there is some new work starting, but it will be the shallow sand territory that will shew the most activity during the spring and summer months. Operators are still hopeful of developing some new territory in Ritchie county. Next to Brooke county, Ritchie furnished the largest amount of new production. It is thought that more small pools can be found in that county, and the search will not be abandoned till the untested territory has been tried out.

The development on Tanners fork, Troy district, Gilmour county, is furnishing some very creditable producers. There is considerable test work starting and under way, and the pool will show some activity.

Roane county has a large area of tested, but not fully developed territory. Light producers are found in the salt sand, on Flat fork, Harper district, and in Walton district, the Big Injun formation has furnished better producers and the producing formation shows more regularity.

The acreage tested and known to be productive is larger in Lincoln county than in any of the counties that have been recently brought into the producing column. Nearly all of the work completed has been of the experimental kind and the results have been such as to open the way for a large amount of development work. Some of the larger companies are getting ready for aggressive operations. Up to the present time no gushers have been found, but the producing formation is regular and capable of furnishing a large number of profitable producers.

The Buckeye fields are not attracting much attention. The new Keener sand pool, near Newport, in Washington county, and the Clinton Lime development, in Fairfield county, are the only attractions at this time. An occasional good producer in the first-named has stimulated development work. In Fairfield county, the Clinton Lime formation still has the talent guessing. There is more wild-cat work under way and starting in this than any other county in South-eastern Ohio,

Resinous Products in Mineral Oils.

PAPER by Dr. R. EICKMANN.

*Presented to the
Third International Petroleum
Congress at Bucarest.*

The question of the separation of resinous substances from mineral oils increased in interest, for analytical and technical purposes when, about 1870, mineral lubricating oils were introduced on the large scale from South-Eastern Russia and North America, and thus concentrated the attention of the scientific men concerned to the technical properties of these substances. Until very lately it has only seemed worth while to pay much attention, analytically or technically, to the black resins containing asphalt, which occur in the black, opaque railroad and cylinder oils; because they are, in fact, solid, usually neutral resins, which, when occurring in considerable amount in car oils and cylinder oils, may form solid bodies in the small lubricating tubes in cylinder lubrication, or in especially unfavourable conditions, even in car boxes.

The light-coloured mineral lubricating oils as a whole can be regarded on the contrary as not liable to resinification under ordinary conditions.

In his first systematic investigation of analytic methods of separating dark asphaltic materials out of black mineral oils, A. Bender followed the already known fact that when dark mineral oils rich in asphalt are dissolved in benzine of a specific gravity of 0.70, a part of the asphalt is precipitated. He established the fact that all dark, German mineral lubricating oils and crude oil from Alsace yielded precipitates of a hard asphaltic character when the benzine solution was allowed to stand for a day, although the precipitate does not always become evident immediately.

These precipitates melt above 100° C. and were soluble in benzol, chloroform, and carbon bisulphide. In the case of three such precipitates obtained from German lubricating oils and Alsatian crude oil to the extent of 1.4 to 2.2 per cent., he established the absence of sulphur and nitrogen and therefore supposed, according to the generally accepted idea, that the asphaltic material had arisen from oxidation of the crude petroleum.

In order to fill the need among technologists and consumers for a more exact analytical measure of this asphalt insoluble in benzine, Holde followed these investigations farther. He shewed how the amount of precipitated asphalt depended upon proportion of benzine used, and then he worked out a quantitative method for the determination of the asphalt, by means of benzine which has been in general use for determining whether mineral lubricating oils have been sufficiently treated with sulphuric acid, and do not tend to resinify.

Previous experiments shewed that when oils containing up to 1.6 per cent. of asphalt insoluble in benzine (50° C. boiling point) are heated in a thin layer for ten hours, they remain liquid. When the oils contain from 1.3 per cent. to 2.3 per cent. of asphalt, they become thick and sticky on heating for ten hours. An Alsatian crude oil containing 5 to 6 per cent. of asphalt became

entirely resinous by heating to 100° C. for ten hours.

Later it was shewn that not only asphalts free from sulphur, but also asphalts with 2 per cent. of sulphur occur in dark mineral lubricating oils, and that oils which are completely soluble in benzine form insoluble asphalts by oxidation in the course of heating in steam cylinders. Kissling has lately even proposed to determine the amount of asphalt after heating the oil for a long time at from 125° C. to 135° C., and he has shewn that the percentage of asphalt may be increased markedly by this means. But these experiments need much further elaboration.

The fact that some of the asphalts found in mineral oils contain sulphur does not speak against the formation of the asphalt from the crude oil, for many crudes contain sulphur.

The asphalts precipitated from dark crude oils by benzine melt in general above 100 degrees. They have a specific gravity above 1, and often contain considerable amounts of iron compounds, apparently iron soaps and iron salts of naphthenic acids from the iron boilers used. For example, such an asphalt contained 1.35 per cent., and another 0.33 per cent. of ash, which was chiefly iron oxide.

Holde, later, separated softer asphaltic products which may be considered as intermediate stages between the very hard asphalt and the oil proper. These were precipitated by alcohol from the solution in ether. He worked out an analytical process for determining these which has been generally used for the valuation of cylinder oil to be exposed to very high temperatures. Later this was altered by separating the paraffin substances which are also precipitated by the alcohol.

A dark lubricating oil of Russian origin was examined by Holde and shewed the following elementary composition:—

	C	H	O	Ash	CH
Oil after extracting resins					
by alcohol-ether (4:3) ..	86.54	12.66	0.8	0	99.2
Oil after extracting resins					
by alcohol-ether (3:4) ..	86.13	12.72	1.2	—	98.8
Original oil	86.03	12.70	1.1	0	98.9
Asphalt precipitated by					
alcohol-ether (4:3) ..	85.73	12.29	1.32	0.33	98.35
Asphalt precipitated by					
alcohol-ether (3:4) ..	84.19	12.06	2.75	1.0	96.25
Asphalt precipitated by					
benzine sp. gr. 0.70 ..	84.44	10.74	3.47	1.35	95.18

The asphalt extracted by alcohol-ether out of Wietz crude oil also shewed a specific gravity greater than 1. It may be seen from the course of the above analyses that with increasing resinification of an oil, the percentage of carbon decreases and to a certain extent the hydrogen likewise, while there is a corresponding increase of oxygen. Similar but more pronounced phenomena will be noted later in the experiments with clear oils.

Since the above investigations Daeschner has

separated asphalts, soft and hard, by means of amyl-alcohol, and has patented a process for the technical separation of asphalt (German patent 124,980). Finally the same chemist has patented a process for the separation of asphaltic materials by an alcoholic solution of caustic soda, which depends upon the precipitation of asphalts by alkalies and points to a weakly acid nature for the asphalts.

The asphalts thus separated by Daeschner have never been examined analytically, but inasmuch as he extracts as much as 18 per cent. from liquid residues of Vietz petroleum, it may be supposed that these asphalts resemble the softer varieties approaching the oils themselves in elementary composition. Finally, the elementary analyses quoted above shew that a relatively small percentage of oxygen in an oil is no proof that it contains no resinous bodies or only traces.

The processes thus far described concerned the separation of black, hard or soft asphaltic resins from mineral oils which contain black, liquid residues to which these residues owe their dark colour.

No attention has thus far been paid to the resins present in the light coloured distillates of the great group of machinery oils. This is because, as already indicated, these machinery oils under the ordinary conditions of use, do not resinify. But the resinous materials from the last transition stage towards asphalt as we find them in the dark liquid residues from such clear oils. The separation of these materials by sulphuric acid is usually not absolutely perfect in ordinary refining. They seem of interest because they furnish evidence as to the possibility of resinifying light coloured oils, and throw light on how resinous and asphaltic substances are formed in the higher boiling fractions from petroleum and shew what methods can be used for their separation.

(a) Separation of resins by means of 70 per cent. alcohol.

The writers followed this problem and used the fact established by Holde in 1895 that resinous materials (not artificially added) can be extracted from mineral lubricating oils by 70 per cent. alcohol. But we found that this means is very inconvenient. It is carried out as follows:—One litre of a clear pure Russian lubricating oil was digested on a water bath with an equal amount of 70 per cent. alcohol for a long time with return condenser. The mixture is given 24 hours to

separate in a stoppered funnel, the layer of oil is drawn off and the alcohol filtered through three thicknesses of filter paper. The strongly yellow alcohol solution is evaporated. By repeating this treatment of the oil 40 times, 4 per cent. of resinous matter is obtained. The characteristics of these resins are interesting. The specific gravity of the oil being 0.91, the specific gravity of the resins in the different successive extracts varied from 1.055 to 1.066. They are not black like previous resins, but only brownish red to brownish yellow. In the first extracts they are very viscous, so that they may be drawn out into threads; in the last extracts they are thick oily substances. The original oil contained carbon 86.5, hydrogen 13, and oxygen 1.5, and the resins, carbon, 82 to 84.4, hydrogen 8.7 to 10.6 and oxygen 4 to 8. The oxygen is proportional to the specific gravity. Only after 22 extractions of the same specimen of oil with an equal volume of alcohol does the oxygen percentage of the resulting resin go below 5.3. The iodine number of the first 11 extracts lies between 15 and 26. The original oil shewed 7.5.

The resins obtained were saponified and the unsaponified portion separated. It was not entirely soluble in petroleum ether. Eighty-five and five-tenths per cent. was obtained of unsaponified resin soluble in petroleum ether. This had an iodine number of 12.3 and shewed carbon 85.8, hydrogen 9.8, oxygen 3.3, sulphur 0.9, and ash 0.2. The insoluble portion soluble in ether was 3.4 per cent. of the whole and formed a dark brown, almost solid mass, while the soluble portion was dark brown, but a sticky, thick substance.

The soap solution contained 11 per cent. of resins soluble in alcohol alkali solution. After evaporating the alcohol, this was treated with dilute hydrochloric acid and the acids thus separated were extracted by ether. This yielded 11.8 per cent. of acids of deep dark brown colour and extremely sticky character. The molecular weight was 387, calculated by titration for a monobasic acid, and was composed of carbon 75.7 per cent., hydrogen 9.3, oxygen 15.0, together with traces of sulphur and ash, corresponding to the formula, $C_{25}H_{37}O_4$, which of course is only on approximation. The material did not suffice for further investigation.

(To be concluded.)

CLASSIFIED IMPORTS INTO UNITED KINGDOM UP TO APRIL 20th, 1908.

IN GALLONS.

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COUNTRY.	ILLUMINATING.		LUBRICATING.		RESIDUALS.		GAS OIL. (Solar)		BENZINE.		FUEL OIL.		OTHER DESCRIPTIONS.		TOTALS.	
	Since Apl. 6.	From Jan. 1.	Since Apl. 6.	From Jan. 1.	Since Apl. 6.	From Jan. 1.	Since Apl. 6.	From Jan. 1.	Since Apl. 6.	From Jan. 1.	Since Apl. 6.	From Jan. 1.	Since Apl. 6.	From Jan. 1.	Since Apl. 6.	From Jan. 1.
Austria ...	—	—	—	16,000	4,000	21,185	—	—	—	—	—	—	—	—	4,000	37,180
Belgium ...	—	—	10,830	216,690	—	36,000	—	—	—	40	—	—	1,440	1,440	12,270	254,170
Canada ...	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Dutch India ...	—	—	—	—	—	—	—	—	—	5,293	470	—	—	—	—	5,293,470
Germany ...	18,540	400,730	73,350	538,860	—	6,090	—	—	—	270	—	—	3,480	6,070	95,640	952,020
Holland ...	—	—	—	9,220	—	—	—	—	—	503	77,340	—	—	19,260	500	105,820
Roumania ...	—	3,114,700	—	—	—	—	—	3,083,150	1,067,820	2,033,900	—	—	—	—	1,067,820	8,231,750
Russia ...	—	6,085,620	274,720	1,420,980	—	68,000	—	—	—	—	—	—	—	—	274,720	7,574,519
U.S.A. ...	12,701,430	40,788,420	1,543,990	13,890,480	—	609,480	347,500	15,228,230	—	349,840	—	1,358,300	20,040	684,290	14,612,960	72,909,060
Other Countries	140	140	185	35,435	—	40	—	—	—	280	40	560	—	160	365	36,615
	12,720,110	50,389,610	1,903,075	16,127,665	4,000	740,790	347,500	18,311,400	1,068,590	7,755,140	40	1,358,860	24,960	711,220	16,068,275	95,394,604

The American Oil Market.

New York, Week ended April 11th.

The more favourable conditions in the Eastern petroleum fields have been the means of stimulating operations generally, and some encouraging results have been encountered, both within and beyond the limits that have marked developments of recent months. In the fields of the Pennsylvania classification, Brooke county, West Virginia, continues to command keenest interest. During the interval the Wellsburg pool has contributed materially to the increasing importance of the county's production. Two of the recent completions came in at the rate of 150 barrels a day, and later reports indicated that they were holding up favourably. Other tests to determine the possibilities of an extension to the pool are due shortly. The Follansbee pool, in the same county, is sustaining its creditable record, says the *Oil, Paint and Drug Reporter*, but no new completions of particular interest have been reported. The older wells have responded liberally to agitation. A gauge of the gusher, which as previously noted, started at the rate of 410 barrels during the first 16 hours after the pay formation had been reached, shewed a capacity of 320 barrels a day. Three other producers in the pool have remained in the class of 200 barrels or better, and several others are sustaining an output of between 150 and 200 barrels a day. The fact that the Follansbee pool is on the river-front induced exploitation of the territory opposite on the Ohio side, but the venture failed to disclose anything of a promising character. Roane county, in the same State, is the scene of renewed activity, and the outlook is considered more promising for successful work, following the completion of a well that was reported good for 50 barrels a day, natural, in the Walton district, Jackson county, West Virginia, within which desultory attempts to find oil in paying quantities have been made in recent years with indifferent success, is again attracting attention, the regularity of the producing formation permitting drilling at a comparatively small expense. The Reas Run district of Washington county is credited with furnishing more new production than any other section in South-eastern Ohio. A late completion that is calculated to occasion a spurt in operations there was reported to be flowing at the rate of 150 barrels a day. Considerable new work is also in progress in the Clinton lime formation in the same county, and a well that responded to agitation by yielding 90 barrels the first 15 hours is the most successful result recorded in that section. The Jennings field of Louisiana continues the feature of the Gulf coast region, two of the late completions being credited with a total capacity of 7,000 barrels a day. The production of the entire field is now placed at 19,000 barrels a day.

REFINED AND PRODUCTS.—The local market for refined has not presented the same degree of activity for foreign requirements as noted in recent reports, and there has been nothing to distinguish the extent of trading for home account. Our record of clearances for the interval shews a total of 9,932,660 gallons, of which 5,600,000 were forwarded in bulk, while for the previous period there was an aggregate of 15,095,590 gallons (6,213,120 in bulk). Chartering of vessels for forward shipment has been less urgent during the week. The following engagements have been reported:—150,000 cases for May shipment to the Philippines, 155,000 cases for May shipment to Australia, and 140,000 cases for May-June shipment to China, New York loading, and 150,000 cases June-July shipment to Japan, 75,000 cases to Adelaide or Melbourne, July-September, and 155,000 cases to Japan, August Philadelphia loading. Quotations have remained in an even basis, the tendency being one of apparent firmness.

The increasing demand for the products for gas engine consumption has constituted the most interesting feature of the local market and stocks, which have been accumulating during the winter months, it is expected,

will shew a substantial reduction with the advance of the more favourable season.

CLOSING QUOTATIONS.

	CRUDE.	In cents per gallon.		Week ended	
				April 4.	April 11.
				1908.	1908.
Pennsylvania crude in bbls.	—	—
Pennsylvania crude in bulk	—	—
Residuum, bbls. for export	—	—

CRUDE AT THE WELLS.

The quotations for oil represented by credit balances were:—

					Week ended	
					April 11.	April 11.
					1907.	1908.
Pennsylvania	..	..	..	..	\$1.78	\$1.78
Tiona	..	..	..	..	1.78	1.78
North Lima	..	..	..	..	0.94	1.04
South Lima	..	..	..	..	0.89	0.99
Indiana	..	..	..	..	0.89	0.99
Illinois, heavy, below 30 deg.	..				—	0.60
Kansas and Indian Ter., 32 deg. and above	..	..	..	..	0.41	0.41
Heavy	..	..	..	..	—	0.28
Humble, Tex.	..	..	..	..	—	0.68
Saratoga	..	..	..	..	—	0.66
Sour Lake, Tex.	..	..	..	..	—	0.68
Jennings, La.	..	..	..	..	—	0.67
CANADIAN OIL :—						
Petrolia	..	..	..	..	1.34	1.44
Oil Springs, less pipeage	..			..	1.41	1.51

REFINED—FOR EXPORT.

		Week ended	
		April 11.	April 11.
		S.W.	W.W.
Barrels, cargo ..	per gal.	8.75	@ 10.75
Philadelphia ..	..	8.70	@ 10.70
Bulk, New York	..	5.00	@ 7.00
Bulk, Philadelphia	..	4.95	@ 6.95
Cases, New York	..	10.90	@ 13.90
Cases Philadelphia	..	10.85	@ 13.85

REFINED IN CASES—110 FIRE TEST.

		Week ended	
		April 4.	April 11.
		1908.	1908.
3,000 to 10,000	..	11.05	11.05
1,000 to 3,000	..	11.10	11.10

REFINED—JOBBER LOTS.

In barrels, pkgs. included.

		Week ended	
		April 4.	April 11.
		1907.	1908.
120 fire test, S.W.	in barrels	12	12
130 fire test, S.W.	..	12½	12½
150 fire test, W.W.	..	13½	13½
In bulk from tanks	..	10	10
300 fire test	..	13½ @ 14	13½ @ 14

NAPHTHA AND GASOLINE.

		Week ended	
		April 4.	April 11.
		1908.	1908.
Naphtha, Auto, 66 @ 72 deg.	..	14.00	14.00
Gasolene, 86 deg.	..	23.00	23.00

PENNSYLVANIAN OIL RUNS from Mar. 25th to April 7th were:—Mar. 25th, 315,024¹; Mar. 26th, 196,581¹; Mar. 27th and 28th, 255,042¹; Mar. 29th, 175,113¹; Mar. 30th, 146,150¹; Mar. 31st, 255,115¹; April 1st, 85,603; April 2nd, 200,728¹; April 3rd and 4th, 232,502¹; April 5th, 202,863¹; April 6th, 198,666¹; and April 7th, 255,115¹.
¹ Includes Illinois Oil.

THE DELIVERIES OF PENNSYLVANIAN OIL from Mar. 26th to April 7th were:—Mar. 26th, 132,173¹; Mar. 27th, 151,120¹; Mar. 28th and 29th, 260,721¹; Mar. 30th, 189,293¹; April 1st, 164,086; April 2nd, 210,886; April 3rd, 162,487¹; April 4th and 5th, 344,869¹; April 6th 188,675¹; April 7th, 199,867¹.
¹ Includes Illinois Oil.

CLEARANCES FOR THE WEEK.

During the week ended April 10th and since Jan. 1, the clearances of petroleum, in gallons, from the port of New York, were as follows:—

	Week.	Year.	1907.
Refined ..	9,932,660	152,706,160	150,995,340
Crude ..	—	3,313,625	787,370
Naphtha ..	13,220	1,569,990	1,993,770
Residuum ..	—	598,900	171,700

EXPORT STATISTICS.

The total exports from the port of New York and from the United States have been:—

	Gallons.
From New York, week ended April 10th	13,243,547
Total from New York, from Jan. 1st, 1908	220,255,172
Same period last year	202,107,265
Increase	18,147,907
From United States, week ended April 10th	19,145,578
Total from United States, since Jan. 1st, 1908	404,765,822
Same period last year	358,470,923
Increase	46,294,899

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The "Review" Shipping List.

APRIL 24, 1908.

(The following abbreviations are used in this table:—L. Left; P. Passed; Arr. Arrived; Sp. Spoken; Tr. Trading.)

Vessel.	From	For.	Latest Date and Position.	Vessel.	From.	For.	Latest Date and Position.
ALCHYMIST	Santander ..	Newport	L. Southampton, April 21	ETELKA	Havre	Batoum	L. April 19
ALEMBIC	London	Lisbon.....	Arr. Mar. 25	EUPLECTELA	Kustendje ..	Bombay	P. Perim, April 15
ALICE ISABELLE..	Sables d'Olonne	New York ..	L. April 17	EXCELSIOR	Rotterdam ..	New York ..	Arr. April 16
AMERICAN	Puerto.....	Del. Break..	L. April 4	EZIO	—	—	Coasting Peru
APPALACHEE	San Francisco	Saigon.....	At Hong Kong, April 1	FRANCE MARIE ..	Vigo.....	New York ..	L. April 10
APSCHERON.....	Batoum	Rouen.....	P. Sagres, April 21	GEESTEMUNDE ..	Tyne	Philadelphia	Arr. April 14
ARAL.....	Tyne	Philadelphia	Arr. April 16	GENESSE	Manchester	N. Orleans & Galveston	P. Fastnet, April 13
ARAS.....	Tyne	Blyth	Arr. April 15	GEORGIAN PRINCE	Cardiff	Novorossisk	P. Constant'ple, April 21
ARGYLL	—	—	Coasting U.S. (Pacific)	GOLDMOUTH	Freshwater..	Hong Kong	Arr. April 9
ASHTABULA	San Francisco	Hankow	L. April 2	GUTHEIL	Tyne	Philadelphia	P. Dunnet Head, April 16
ASTRAKHAN.....	Hamburg and Tyne	Philadelphia	Arr. April 18	HAINAUT	Piræus.....	Antwerp	P. Gibraltar, April 18-19
ATLAS	—	—	Coasting U.S. (Pacific)	HARRY WADSWORTH	Hull.....	New Orleans	P. Prawle Pt., April 7
AUGUSTA	Baltimore ..	London	P. Cap. Henry, April 13	HELIOS.....	New York ..	Nordenhamm	L. April 13
AUGUST KORFF..	Hamburg ..	Philadelphia	Arr. April 16	HERMIONE	Hamburg ..	New York ..	P. Scilly, April 10
AUREOLE	Tyne	New York ..	Arr. April 13	HOTHAM NEWTON	Kustendje ..	Calais	Cld. Constant'ple, April 16
AZOV.....	—	—	Trading on W.C. of South Amca.	IMPERIAL	—	—	Tr. on Lakes btn. U.S. A. and Can.
BAKU STANDARD	Philadelphia	Havre	P. Del. Break, April 14	IOANNIS COUTZIS	Batoum	Dunkirk	P. Constant'ple, April 14
BALAKANI.....	Batoum	Hamburg ..	L. Ymuiden, April 22	IROQUOIS	London	New York ..	In Wireless Com., Browh'd, Apr. 21
BATOUM	Alexandria ..	Kustendje ..	L. April 19	J. B. AUG. KESSLER	Samboe	Europe	L. April 12
BAYONNE	Batoum	Trieste.....	Arr. April 11	JAMES BRAND	Kustendje ..	London	P. Sagres, April 19
BEACON LIGHT ..	Philadelphia	Havana	L. April 14	JULES HENRI	Marseilles ..	New York ..	L. April 13
BLOOMFIELD	Penarth	Batoum	P. Sagres, April 13	KURA	Trieste	Ibrail	At Kustendje, April 15
BORJOM	Batoum	Alexandria..	Cld. Constant'ple, April 11	LA CAMPINE.....	Antwerp	Philadelphia	P. Lizard, April 9
BRILLIANT	Philadelphia	Copenhagen	P. Del. Break, April 9	LA FLANDRE	Ghent	New York ..	Arr. April 20
BROADMAYNE	Rouen	Tyne	Arr. April 19	LA HESBAYE.....	Antwerp	New York ..	Arr. April 16
BULLMOUTH	Singapore ..	Calcutta	L. April 9	LA VIGUESA.....	Port Arthur (Texas)	Buenos Ayres	L. Mar. 13
BULYSES	Kustendje ..	Port Said ..	Arr. April 17-18	LACKAWANNA....	Tyne	New York ..	P. Butt of Lewis, April 15
BURGERMEISTER PETERSEN	Danzig	Philadelphia	At Halifax; April 20	LANSING.....	Pt. San Luis	San Francisco	L. April 6
CALCUTTA.....	San Francisco	Shanghai ..	Arr. abt. April 21	LE COQ.....	Kustendje ..	Havre	Arr. April 21
CAPTAIN A. F. LUCAS	New York ..	Hamburg ..	Sp. April 10, 41 N. and 67 W	LOUTSCH	Batoum	Odessa	In Port, Mar. 16
CARDIUM	Palembang..	Yokohama ..	L. April 6	LUCERNA	Tyne	New York ..	Arr. April 19
CATANIA	Pt. San Luis	San Francisco	L. April 9	LUCILINE	Cette	Kustendje ..	Arr. April 22
CAUCASIAN	Port Arthur (Texas)	Antwerp	L. Newport News April 9	LUMEN.....	Tyne	Philadelphia	Arr. April 14
CHARLOIS	Amsterdam..	Philadelphia	P. Lizard, April 10	LUX	New York ..	Seville.....	L. April 18
CHESAPEAKE	Cardiff.....	Liverpool ..	In Port, April 1	MAKKAWEI	Marseilles ..	Novorossisk	Cld. Constant'ple, April 4
CHESTER	Batoum	Antwerp	P. Sagres, April 21	MANHATTAN	New Orleans	Bremen and Antwerp	At Bremen, April 10
CIRCASIAN PRINCE	—	—	Trading on W.C. of South Amca.	MANNHEIM	Hamburg and Tyne	Philadelphia	Arr. April 18
CITY OF EVERETT	Tyne	Philadelphia	Arr. April 14	MARGARETHA ..	London	Kustendje ..	P. Gibraltar, April 19-20
CLAM	Dunkirk	Constant'ple	At Dartmouth, April 21	METEOR.....	Shanghai ..	—	At Suez, April 22
COL. E. L. DRAKE	Tacoma	San Francisco	Arr. Mar. 29	MEXICAN PRINCE	Penarth	Philadelphia	Arr. April 11
COWRIE	Aroe Bay ..	Rotterdam ..	Arr. April 15	MIRA.....	Penarth	Port Arthur (Texas)	P. Barry Island, April 9
CUYAHOGA	Manchester	Philadelphia	L. April 21	MUREX.....	Balekappan	Singapore ..	Arr. Mar. 29
CYMBELINE	Avonmouth..	Port Arthur (Texas)	L. April 1	NARRAGANSETT..	London	New York ..	At Gravesend, April 23
CZAR NICOLAI II.	Batoum	Hamburg ..	Cld. Constant'ple, April 13	NERITE	—	—	Tr. in China Seas
DAGHESTAN.....	Batoum	Genoa.....	Cld. Constant'ple, April 17	NEW YORK	New York ..	Southampton	L. April 18
DAKOTAH	San Francisco	Hong Kong..	Arr. abt. April 22	OAKWOOD	Cienfuegos ..	London	L. April 5
DELAWARE	Liverpool ..	Philadelphia	Arr. April 14	OBERON	Cardiff	New York ..	Arr. April 12
DERBENT	Batoum	Antwerp	In Port, April 21	OCEAN	Antwerp	Philadelphia	P. Scilly, April 14
DEUTSCHLAND ..	New York ..	Stettin.....	Arr. April 19	OILFIELD	Dartmouth..	Kustendje ..	P. Prawle Pt., April 23
DIAMANT	Hamburg ..	Philadelphia	L. Tyne, April 18	ORIFLAMME	Philadelphia	Bordeaux ..	P. Del. Break, April 10
EDWARD DAWSON	Antwerp	Hull.....	Arr. April 18	OSCEOLA	Barry	Rosario	Arr. Mar. 29
ELAX.....	Batoum	—	At Port Said, April 20-21	OTTAWA	London	N. Orleans or Galveston	At Newport News, April 20
ELISE MARIE	Hamburg ..	New York ..	L. Tyne, April 12	OURAL	Manchester..	Batoum	P. Eastham, April 11
ENERGIE	Philadelphia	Gothenburg	L. April 15	PALEMBANG	—	—	Tr. East Indies & China Seas
ERIVAN	Batoum	Hamburg ..	P. Gibraltar, April 21				

Vessel.	From.	For.	Latest Date and Position.	Vessel.	From.	For.	Latest Date and Position.
PAULA	Stettin & Tyne	Philadelphia	P. Butt of Lewis, April 15	SOYO MARU	San Francisco & Gaviota	Yokohama ..	Arr. Mar. 19
PECTAN	London and Emden	Galveston ..	Arr. April 15	SPONDILUS	Rotterdam ..	—	P. Aden, April 20
PENNOIL.....	Philadelphia	Rotterdam..	Arr. April 17	STANDARD	Philadelphia	Danzig	L. April 16
PERLAK	Hong Kong ..	Palembang..	L. Feb. 17	STROMBUS	Freshwater..	Europe	P. Perim, April 20
PHOEBUS	New York ..	Hamburg ..	In Port, April 19	SUN	Philadelphia & New York	Avonmouth	Arr. April 13
PINNA	Yokohama ..	Gaviota	L. April 5	SUNLIGHT.....	Rivadesella..	Swansea	In Port, April 18
POTOMAC	London	Philadelphia	P. Nantucket, April 21	SURAM.....	Dublin	Newport	In Port, April 22
PROMETHEUS....	Rotterdam ..	New York ..	P. Prawle Pt., April 16	SUWANEE	Philadelphia	Hull	P. Del. Break., April 14
PRUDENTIA	—	Singapore ..	Arr. April 17	SVIET	Batoum	Odessa	L. Mar. 21
QUEVILLY.....	Rouen.....	New York ..	At Havre, April 21	TELENA	Takeotoyo ..	Singapore ..	Arr. April 12 & dry docked
RION.....	Penarth	Philadelphia	P. Barry Island, April 3	TEREK.....	Port Arthur (Texas)	Hamburg ..	L. Newport News, April 17
ROCK LIGHT	Amsterdam..	London	Arr. April 20	TIFLIS	Hamburg ..	Batoum	P. Gibraltar, April 22
ROMANY.....	Kustendje ..	Aroe Bay ..	L. Bombay, April 21	TIOGA	Sunderland ..	New Orleans	P. Dover, April 3
ROSSIJA	Tyne	Barletta	Arr. April 17	TONAWANDA	San Francisco	Chingkiang..	L. Mar. 2
ROTTERDAM	Amsterdam..	New York ..	Arr. April 21	TROCAS	Samboe	Suez	L. April 12
RUSSIAN PRINCE	Boston.....	New York ..	In Port, April 11	TUSCARORA	New York ..	Calcutta	Arr. Mar. 25
SALAHADJI	—	—	Tr. Sts. Settlements and Java Seas	VEDRA.....	Palembang..	Japanese Ports	L. Singapore, April 18
SAN CRISTOBAL..	Rochester ..	Minatitlan ..	P. Sand Key, April 9	VILLE DE DIEPPE	Rouen	Philadelphia	L. April 1
SAN IGNACIO DE LOYOLA	Philadelphia	Pasages	Arr. Feb. 15	VOLUTE	Shanghai ..	Balekappan	Arr. April 13
SAXOLEINE	New York ..	Rouen	L. April 11	WASHINGTON....	New York ..	Savona	Arr. April 21
SEMINOLE.....	San Francisco	Shanghai ..	L. Feb. 24	WEEHAWKEN	Kustendje ..	Barrow	Arr. April 17
SINGU	—	—	Tr. in East Indies	WILLKOMMEN....	New York ..	Hamburg ..	In Port, April 19
SNOWFLAKE.....	Kustendje & Bordeaux	—	P. Barry Island, April 22	WINNEBAGO	San Francisco	Itosaki and Shanghai	L. Mar. 28

Latest Market Intelligence.

LONDON OIL MARKET.

Supplied by Messrs. Benjamin & Gee, 31, St. Mary Axe, E.C.

April 24th, 1908.

Since our last report the prices of Petroleum have remained stationary, being:—Russian, 5⁷/₈d. to 6d.; American, 6¹/₂d. to 6⁵/₈d.; Water White, 7¹/₂d. to 7⁵/₈d.; Roumanian, 6³/₄d.

LUBRICATING OILS.

The latest quotations are:—

American pale, £7 7s. 6d. to £11.

American dark cylinder, from £9 2s. 6d.

American filtered cylinder, from £11 15s.

No. 1 Russian, £10 5s.

TURPENTINE.

Turpentine has been a quiet market, prices being rather lower:—American, Spot, 34s. 9d.; May-June, 34s. 6d.; July-December, 34s. 6d.

LIVERPOOL OIL MARKET.

April 24th.

Refined oils are quiet, and sellers quote 6³/₄d. for Russian, Galician or Roumanian; and 7¹/₄d. to 8¹/₄d. per gallon for American.

PETROLEUM SPIRIT continues at 1s. 0¹/₂d. to 1s. 3d. per gallon for American deodorised, according to quality on the spot.

LATEST AMERICAN PRICES.

New York, April 23rd.

Refined, in cases, is steady at 10.90; Standard White, 8.75; Credit balances, 1.78c.

PHILADELPHIA, April 23rd.

Standard White is still quoted at 8.70.

RUSSIA.

BAKU, April 20th.

The Baku oil market is weaker. Crude oil, spot, 24³/₄-25¹/₄ copecs per pood. Residuals, spot, 25³/₄ copecs. Kerosene, in ships, 29¹/₂ copecs. The Nicolaeff railway has bought from the Mazout Co. 3,000,000 poods of residuals and 2,000,000 poods from Assadulaeff for delivery at Nijni during the navigation at 36 copecs. There was a sale of 2,000,000 poods of goodron, for delivery in ships in April and May, at market price plus 3¹/₂ copecs.

BELGIUM.

ANTWERP, April 20th.

The petroleum market is firm. Price of Standard White, spot, 22 francs per 100 kilos.

FRANCE.

PARIS, April 20th.

Illuminating oil is quoted in bulk, in whole tank waggons, 21 francs per hectolitre; spirit, 31.75 francs per hectolitre. Special white oil, in barrels or cans, 29 francs per hectolitre.

GERMANY.

HAMBURG, April 20th.

The kerosene market is quiet. The price of American Standard White is 7.55 marks per 50 kilos; Russian, 7.35 marks.

ROUMANIA.

April 17th.

Crude oil from different fields, including pipe line charges, per 100 kgs.	Francs.
Refined oil, exclusive of taxes	... 4.60
Benzine, 717-720, including taxes	... 6.00-6.50
Benzine, 750-760	... 20.00
Residuals in tank waggons, at refinery	... 15.00-15.50
Paraffin	... 3.90-4.00
	... 120.00

PRICES FOR EXPORT.

Refined oil in tank waggons, per 100 kgs.	7.50-8.00
Benzine, sp. gr. 0.710-0.715, f.o.b.	... 17.00-18.00
" sp. gr. 0.715-0.720	" ... 15.00-16.00
" sp. gr. 0.730-0.740	" ... 10.00-11.00
" sp. gr. 0.745-0.755	" ... 9.00-10.00

INDIA.

BOMBAY, April 4th.

Standard Oil Co., of New York.

Current rates are:—

American, "Snowflake," 150 deg.	.. ..	Rs. 6 4 2
" Chester, 76 deg.	.. ..	4 12 2
" Monkey Brand, 76 deg.	.. ..	4 6 2
" Bulk, 125 deg. (in local made tins)	.. ..	3 13 6
" " 125 deg. (8 Imperial gallons)	.. ..	3 3 6

The Asiatic Petroleum Company, Limited.

Current rates are:—

Burmah oil, in tins, per pair	.. ..	3 8 0
Russian "Rising Sun," bulk, per unit	3 6 0
" " tins, per pair	4 0 0
Roumanian oil, in tins, per pair	3 14 0
"Anchor" per case	4 8 0

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IMPORTS of PETROLEUM into UNITED KINGDOM

Specially prepared for .
this Journal by . . .
the Custom House. .

FOR THE WEEK ENDED 13TH APRIL, 1908—

DATE.	PORT AND IMPORTERS.	DESCRIP- TION.	No. OF GALS.	PORT WHENCE.
April.	LONDON—			
7	H. Finkler and Co.	.. Resid.	4,000	Fiume
7	London and India Dock Co.	Lub.	480	Hamburg
7	"	.. "	2,380	"
7	"	.. "	1,400	Philadel.
8	R. Park and Co.	.. "	120	Marseilles
9	Argo Steamship Co.	.. "	50	Bremen
9	A. Brown and Co.	.. "	2,400	Philadel.
9	Worthington and Boler	.. "	4,400	"
9	Page, Son and East	.. "	120	Antwerp
10	T. H. Lee	.. "	100	Hamburg
10	M. Benscher	.. Benzine	70	"
11	Scott's Wharf	.. Lub.	150	"
11	Fielder, Hickman and Co.	.. "	6,000	Philadel.
11	M. Record	.. "	4,000	"
11	Anglo-American Oil Co.	Gas	347,500	New York
	(Iroquois)			
11	"	Lamp	2,081,820	"
11	" (Navahoe)	"	2,501,820	"
11	Lubricating & Fuel Oils, Ltd.	Lub.	12,510	Philadel.
13	Anglo-American Oil Co.	.. "	13,000	"
13	Mercantile Lighterage Co.	.. "	24,000	"
13	W. H. J. Alexander	.. "	4,100	"
13	Trinidad Lake Asp. Pav. Co.	.. "	2,400	"
13	Page, Son and East	.. "	160	Antwerp
13	Argo Steamship Co.	.. "	150	Bremen
13	W. Manning	.. "	130	Hamburg
13	T. H. Lee	.. "	100	"
13	A. Brown and Co.	.. "	560	"
	LIVERPOOL—			
7	Meade-King, Robinson & Co.	Lub.	5,000	New York
8	"	.. "	120	Hamburg
9	Pickfords, Ltd.	.. "	350	"
9	Anglo-American Oil Co.	Lamp	573,970	Philadel.
	(Cuyahoga)			
9	Burnaby and Chantrell	.. L.Comp.	1,180	New York
10	Worthington and Boler	.. Refined	4,000	Philadel.
10	"	.. Lub.	3,800	"
10	Bowring Petroleum Co.	.. "	1,270	"
10	W. B. Dick and Co.	.. "	26,110	"
10	Crew, Levick and Co.	.. "	18,350	"
10	"	.. M. Colza	1,080	"
10	A. Hopps and Sons	.. Lub.	12,570	"
10	"	.. "	5,340	Baltimore
10	Vacuum Oil Co.	.. "	10,600	New York
11	American Line	.. "	55,040	Philadel.
11	Bramwell, Fern and Co.	.. "	620	"
11	Geo. B. Taylor	.. "	47,400	"
11	Midland Railway	.. "	970	"
11	Meade-King, Robinson & Co.	.. "	20,720	"
13	"	.. "	11,520	"
13	"	.. "	21,120	Baltimore
13	A. J. Paterson	.. "	5,440	"
13	E. H. Kellogg and Co.	.. "	2,000	New York

DATE.	PORT AND IMPORTERS.	DESCRIP- TION.	No. OF GALLS.	PORT WHENCE.
April				
13	George B. Taylor	.. Lub.	37,610	New York
13	Valvoline Oil Co.	.. "	11,940	"
	BRISTOL—			
7	W. G. Clarke	.. M. Colza	1,160	Antwerp
7	J. Hare and Co.	.. Lub.	2,200	New York
7	H. R. James and Sons	.. "	2,600	"
7	First Anglo-Russian Oil Co.	.. "	4,490	"
9	British Petroleum Co.	Lamp (Cymbeline)	1,666,790	Pt. Arthur
13	J. Hare and Co.	.. "	2,200	New York
13	W. Smith and Co.	.. Lub.	17,040	"
13	British Petroleum Co.	.. "	270	Antwerp
	GRIMSBY—			
7	J. Sutcliffe and Son	.. "	380	"
7	"	.. "	280	"
9	"	.. "	480	"
	HULL—			
7	T. Wilson, Sons and Co.	.. "	7,360	Reval
7	Wilsons and N.E. Railway Shipping Co.	.. "	480	Antwerp
7	"	.. "	2,400	Hamburg
9	"	.. "	200	"
9	W. Gilyott and Co.	.. "	3,360	Reval
9	Thos. Wilson, Sons and Co.	.. "	1,000	Antwerp
9	"	.. "	54,840	New York
10	"	.. "	17,720	"
10	Mordaunt Bros.	.. "	4,200	"
10	W. Gilyott and Co.	.. "	46,840	"
	MANCHESTER—			
9	Meade-King, Robinson & Co.	.. "	12,800	Hamburg
9	G. B. Taylor	.. "	600	"
9	J. T. Fletcher and Co.	.. "	180	Antwerp
9	Meade-King, Robinson & Co.	.. (Oural)	130,000	Batoum
9	Meade-King, Robinson & Co.	.. "	2,000	"
9	Bramwell, Fern and Co.	.. (Oural)	2,000	"
9	"	.. "	130,000	"
13	Lamport and Holt	.. "	670	New York
13	Anglo-American Oil Co.	Lamp (Cuyahoga)	1,076,740	Philadel.
	MIDDLESBRO'—			
9	J. J. Sutherland	.. Lub.	2,000	Antwerp
	NEWCASTLE—			
7	Tyne-Tees Steamship Co.	.. "	3,760	"
9	"	.. "	840	Hamburg
	PLYMOUTH—			
9	T. Nicholson and Co.	.. "	300	"
	GLASGOW—			
7	Anchor Line	.. "	55,720	New York
9	Clyde Shipping Co.	.. "	40	Antwerp
13	J. and A. Allan	.. "	69,850	Philadel.

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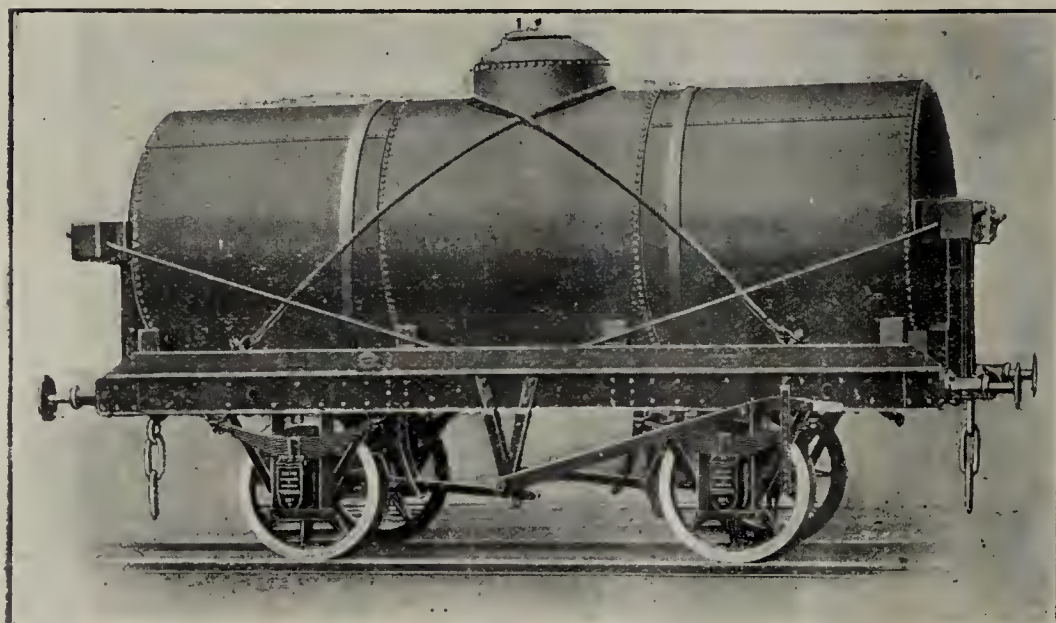
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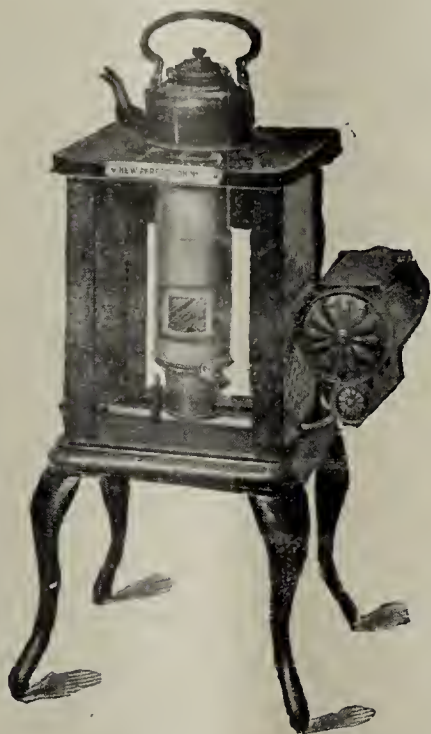
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— QUOTATIONS ON APPLICATION.

IMPORTS.—(Concluded).

DATE.	PORT AND IMPORTER.	DESCRIP- TION.	NO. OF GALLS.	PORT WHENCE.
April	GRANGEMOUTH—			
7	W. Graham-Yooll and Co...	Lamp	4,000	Hamburg
7	J. Currie and Co. ..	Lub.	4,600	"
7	"	"	840	"
10	W. Graham-Yooll and Co...	Lamp	5,200	"
10	J. Currie and Co. ..	Lub.	11,820	"
13	"	"	1,200	"
13	"	"	360	Bremen
	LEITH—			
7	G. Gibson and Co. ..	"	140	Antwerp
9	"	"	80	"
9	J. Currie and Co. ..	"	80	Hamburg
11	"	"	580	"
11	W. Graham-Yooll and Co...	Lamp	2,660	"
	LERWICK—			
7	Shetland Whaling Co. ..	"	140	Larvik
	BELFAST—			
10	J. C. Pinkerton and Co. ..	Lub. Gr.	120	Hamburg
	Total for Week ..		9,247,650	

FOR THE WEEK ENDED 20TH APRIL, 1908—

LONDON—				
14	Drolenveaux and Bremner	Benzine	100	Hamburg
14	T. H. Lee	Lub.	190	"
14	Bowring Petroleum Co. ..	M.Lub.	8,000	Philadel.
14	Mordaunt Bros. ..	Lub.	4,200	"
14	Union Lighterage Co. ..	M.Lub.	39,370	"
15	W. H. J. Alexander ..	"	10,660	Hamburg
16	Page, Son and East..	Lub. Gr.	280	Antwerp
16	Drolenveaux and Bremner..	Benzine	100	Hamburg
16	London and India Docks Co.	Lub.	3,810	"
16	General Steam Nav. Co. ..	Benzine	500	Rotterdam
16	Anglo-American Oil Co. ..	Lub.	427,490	New York
	(Narragansett)			
16	"	Lamp	2,564,210	"
16	E. J. Walkinshaw ..	Lub.	10,000	Philadel.
18	Mordaunt Bros. ..	"	13,000	New York
18	Mercantile Lighterage Co.	"	2,500	"
18	Fielder, Hickman and Co...	"	20,440	"
18	"	"	4,600	"
18	"	Lub. Gr.	4,960	"
18	United Shipping Co. ..	M.Lub.	65	Copenhagen
18	Simpson, Spence and Co. ..	"	80	Philadel.
18	Anglo-American Oil Co. ..	Lub.	51,000	"
LIVERPOOL—				
14	C. C. Wakefield ..	M.Lub.	490	Antwerp
14	Stockdale and Doel ..	"	2,800	Boston
14	Crew, Levick, and Co. ..	"	1,240	Philadel.
14	"	"	830	"
15	Schlieman's Oil Works ..	Lub.	1,000	New York
15	Meade-King, Robinson & Co.	M.Lub.	10,400	Philadel.
18	Vacuum Oil Co. ..	Lub.	3,200	New York
BARROW—				
18	Anglo-American Oil Co. ..	Naph.	662,560	Kustendje
	(Weehawken)			
18	"	Benzine	405,260	"
BRISTOL—				
14	Ford and Canning ..	Lub.	4,800	New York
14	First Anglo-Russian Oil Co.	"	2,150	"
14	H. R. James and Sons ..	"	12,840	"
14	Anglo-American Oil Co. ..	Lamp	1,758,880	"
	(Sun)			
15	E. Stock and Sons ..	Lub.	2,000	Hamburg
15	Pickford's, Ltd. ..	L. Paste	980	"
16	Evans, Gadd and Co. ...	"	160	"
18	F. F. Fox and Co. ..	Lub.	650	New York
GRIMSBY—				
14	J. Sutcliffe and Sons ..	"	240	Antwerp
14	Wilsons and N.E. Railway Shipping Co.	"	560	Hamburg
15	British Petroleum Co. ..	Refined Lamp	471,000	Baltimore
	(Aras)			
HARWICH—				
16	D. Howard ..	Lub.	160	Antwerp

DATE. April.	PORT AND IMPORTERS	DESCRIP- TION.	NO. OF GALLS.	PORT WHENCE.
MANCHESTER—				
14	F. Pearson	"	390	Hamburg
14	Bramwell, Fern and Co. ..	"	1,030	New York
14	W. Hodgson and Co. ..	"	3,540	"
14	J. T. Fletcher and Co. ..	"	120	Antwerp
14	Fletcher, Woodhill and Co.	"	240	New York
14	G. B. Taylor	"	166,880	"
15	Schofield and Co. ..	"	1,380	"
15	Liverpool Storage Co. ..	Lub.	27,080	New York
15	Meade-King, Robinson & Co.	"	5,000	"
16	Pickfords	L. Paste	160	Hamburg
NEWPORT—				
15	Jones, Heard and Co. ..	Lub.	6,000	New York
15	"	M. Colza	10,000	"
SOUTHAMPTON—				
14	Cox Shipping Agency ..	Fuel	40	Cape Town
SWANSEA—				
15	Burgess and Co. ..	L. Paste	170	Hamburg
15	"	Pet. Refuse	3,480	"
DUNDEE—				
14	D. Alexander and Sons ..	Lub.	10,400	"
GLASGOW—				
14	Anchor Line	M. Colza	8,960	New York
15	"	Lub.	31,150	"
GRANGEMOUTH—				
18	W. Graham-Yooll and Co...	Lamp	6,680	Hamburg
18	J. Currie and Co. ..	Lub.	2,000	"
18	"	"	400	"
LEITH—				
14	J. Currie and Co. ..	"	160	"
14	Henderson and McIntosh ..	"	27,160	Philadel.
BELFAST—				
15	J. C. Pinkerton and Co. ..	Lub. Gr.	300	Antwerp
15	"	Lub.	150	"
			6,820,625	
Correction—				
LIVERPOOL—				
30/3	Meade-King, Robinson & Co.	Lamp		Pt. Arthur
	(Mira)			
Deduct to correct—				
BRISTOL—				
30/3	British Pet. Co. (Cymbeline)	Lamp	13,210	Pt. Arthur
Add to correct:—				
MANCHESTER—				
2/4	Meade-King, Robinson & Co.	Gas	74,200	"
	(Mira)			
	Total for the Week ..		6,881,615	
	Total for the Fortnight ..		16,129,265	

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The Petroleum Review.

By PAUL DVORKOVITZ.

Vol. XVIII. (New Series.)

MAY 9TH, 1908.

No. 424.

THE PETROLEUM REVIEW:

The ANNUAL SUBSCRIPTION for both English and Foreign readers is 26s., including Postage. Single Copies may be had at the offices at 1s.

The Editor would esteem it a favour if readers, when communicating with the various firms advertising in our pages, would mention the "Review."

Contributions upon items of interest are always welcomed from subscribers, but in each case these should be accompanied with the name and address of the sender, not necessarily for publication.

Editorial Notes.

Taking, as we have done, considerable interest in the question of the use of a heavier benzine for use in internal combustion engines, it is a matter for congratulation that the past year or so has seen quite a change in the attitude of motorists in regard to this subject. When some months ago, Dr. Dvorkovitz gave evidence as to the better results which would be achieved by using a heavier motor spirit, there were many motorists who looked upon his conclusions *cum grano salis*. Now, however, a complete change has set in, and to-day we see every large company responsible for the distribution of petrol in this country, specially catering for this new factor, by placing upon the market a .760 spirit. Practical results have been in full accord with the deductions placed on record in the report of the Motor Fuels Committee of the Motor Union, and those who have used the heavier spirit are at one upon the fact that not only does its use produce greater energy, but from sooty plugs there is the same immunity as with a lighter and dearer spirit. As time goes on we are convinced that the demand among motorists for this heavy spirit will continue to increase until it will be quite the exception to run upon spirit with a gravity such as is so common to-day.

Though English enterprise has gone into many oil producing regions with more or less success, there are few companies that have such a satisfactory record as those engaged in the Californian fields, and the declaration of a forty per cent. dividend to the shareholders of the California Oil-fields, Ltd., at their meeting this week, is in itself evidence of the great progress which English capital has made in that Western State. At present the company's holdings in the State are nearly seven thousand acres, and much of the territory recently acquired is being developed as rapidly as possible, there being to-day approximately sixty producing wells upon the property. It says much for the wisdom of those in charge of the

company's affairs that they are not resting upon the success which has so far been achieved, and leaving the future to take care of itself, but are putting forward every effort to develop their property by carrying out an active drilling campaign. This policy stands in strange contrast to that adopted by other and not a few companies, and inasmuch as we never hesitate to blame the short-sighted attitude taken up by those in charge of many of our unfortunate petroleum concerns, we must extend our congratulations to Mr. Robert Balfour, M.P., and his co-directors on the board of the California Oil-fields, Ltd., for their consistent care and energy which has brought its own reward to the shareholders in the shape of large and well-earned dividends.

The production of crude oil in Galicia, which for some time has stood at 120,000 to 125,000 tons per month, has lately experienced a further increase as a result of the striking of very prolific new wells at Boryslaw-Tustanowice. The price of crude oil continues to decline, and at the time of writing has fallen as low as 14 francs and even 12½ francs per ton for spot delivery, but finds no ready market even at this price. Negotiations have been re-started for the formation of a refiners' cartel and of an association for the joint sale of crude oil. There are, however, very serious obstacles in the way of the realisation of these proposals, and the result is very uncertain. The agitation raised by the Austro-Hungarian refiners against the Vacuum Oil Co. has not met with any great success, and as the Government have declined to take action, the Vacuum Oil Co. continues to extend its distributing operations on the home market. The crude oil producers shew no inclination to help the refiners in their agitation, as they consider that they have not been treated fairly by the refiners' combine in the past in the matter of prices, and now hope to benefit by the rivalry between the refiners and the Vacuum Oil Co.

The latest news which comes from America concerning one of the most prolific territories, is far from comforting. It is to the effect that the famous Glenn Pool, which has in those fields in the Mid-Continent been producing such enormous quantities of oil, is on a rapid decline. Not long ago the daily output of the field was about 175,000 barrels, and everyone concerned was wondering when facilities would be forthcoming to take care of the enormous production. Trunk pipe lines were laid this way and that, two of them going some hundreds of miles to the Mexican Gulf, and even now, when there is still talk of another pipe line of large diameter being laid, comes the news that the daily production has already dropped to about 50,000 barrels daily, and is still decreasing. The effect of such a quick change has been most depressing upon operators, and it is no surprise to

find that throughout the Mid-Continent fields, new work is very far behind what it was this time a year ago. All eyes are now turned to the opening of other prolific pools, but these, as yet, have to be discovered, and their discovery is by no means an easy matter.

THE TIN PLATE MARKET.

Messrs. Norton, Owen & Co., of 4, Bishopsgate Street Within, London, E.C., report under date May 7th, 1908, as follows:—

The prevailing depression in business appears to be affecting the tin plate trade, as during the past fortnight large enquiries have been scarce, and in consequence prices are somewhat easier. The general position, however, is good - the larger producers especially being well booked for some time ahead. We make prices of oil sizes to-day as under:—

1c	18 $\frac{3}{4}$ × 14	124 sheets	110 lbs.	13/0 to 13/1 $\frac{1}{2}$	per box.
1c	19 $\frac{1}{4}$ × 14	120 "	110 "	13/0 to 13/1 $\frac{1}{2}$	"
1c	20 × 10	225 "	156 "	18/3 to 18/4 $\frac{1}{2}$	"

F.o.b. Wales. Tin lining and iron hooping extra.

GROSNY PETROLEUM PRODUCTION.

ENCOURAGING PROSPECTS.

The figures of the production of crude oil at the Grosny oil field during February are not yet available, but they promise to be unusually large. They are certain to be over 4,000,000 and may come nearer 5,000,000 poods. The month was remarkable for the large number of spouters which were flowing. In addition to the two spouters which have been flowing for a long time on the Akhverdoff Co.'s plot, No. 22, a well on plot No. 7 of the executors of Maximoff, which formerly gave only water, began to spout in February, and produced 300,000 poods of oil. Probably excited by the activity of this well, a well on the Akhverdoff Co.'s plot, No. 44—an old one and a poor producer—suddenly began to spout, and yielded 37,000 poods. The Spies Co.'s spouter, on the Baskakoff plot, continues to flow uninterrupted. All these spouters are in the eastern part of the field. In the western part of the field, the Spies Co. obtained a spouter on their plot, No. 32. After the period of stagnation through which the Grosny petroleum industry has been passing in recent years, these results are very encouraging, and if the increased production is maintained during the rest of the year the total for 1908 will come up to at least 50,000,000 poods.

LONDON OIL SHARE MARKET.

FRIDAY, MAY 8TH, 1908.

Business continues to be very restricted on the Stock Exchange, the only live centre being the American Market, and even there the dealing is principally professional, so that it is no matter of surprise that in the Oil Share Group of the miscellaneous department there are practically no alterations to record.

The first change occurred from the prices quoted in our last issue on the following Tuesday, when Shell Transport Ordinary moved up 6d. per share to 45s. to 46s. and the Preference were $\frac{1}{4}$ better at 10-10 $\frac{1}{2}$. On Wednesday Schibaieff Preference lost $\frac{1}{8}$ at $\frac{7}{8}$ -1 $\frac{1}{8}$, while with Thursday's dealings the sale of a few shares in Assam Oil depressed the quotation $\frac{1}{16}$ at $\frac{7}{16}$ - $\frac{9}{16}$, and Shell Transport Ordinary also lost the turn, closing 3d. lower at 44s. 9d. to 45s. 9d.

May 1st was a Stock Exchange holiday, and since then business has been absolutely stagnant, quotations being merely cited day after day without alteration.

The End-April Settlement commenced on the 27th, the general rate of interest charged being about 5 per cent. to 7 per cent.

Alterations in the making-up figures from those of the previous Account are as follows:—

Rise—Baku Ordinary 3d. at $\frac{1}{16}$, Russian Ordinary 3d. at 3s. 3d., Spies 3d. at 9s. 9d.

Fall—Baku Preference 3d. at $\frac{1}{8}$, Shell 6d. at 45s. 3d.

No change—Anglo-Russian Petroleum at 1s., Russian Preference at 3s. 6d., Schibaieff Ordinary at $\frac{1}{8}$, and the Preference at 1.

AN INTERESTING CATALOGUE.

A most interesting catalogue dealing with pumps has just been issued by the well-known firm of Messrs. W. H. Willcox and Co., Ltd., of 23, Southwark Street, London, S.E. The name of "Willcox" is synonymous with everything that is good in the line of pumps, and the new illustrated booklet which gives prices and particulars of this firm's popular types of pumps, as well as including details of new patterns, should be in the hands of every user. A post-card to Messrs. Willcox will bring this interesting catalogue per return.

LOSS OF THE S.S. "TANCARVILLE."

Since our last issue, we have to record the loss of another oil-tanker—the "Tancarville"—one of the earliest specimens of bulk oil carriers. The "Tancarville" was built at Stockton by Messrs. Craig, Taylor and Co., almost twenty years ago for the European Petroleum Co. The "Tancarville" remained in active service until about three years ago, when she was transformed by the Smiths Dock Co. and converted into a floating oil depôt.



Since that time she has been in continuous service in the Far East. A few days ago an explosion took place upon the vessel and she became a total wreck. Our photograph shews the converted "Tancarville" being towed by a tug belonging to Mr. William Watkins, of Mark Lane, E.C., to the Far East, a journey which was successfully accomplished in a little over forty days.

THE CALIFORNIA OILFIELDS, LIMITED.

REMARKABLE PROGRESS—FORTY PER CENT. DIVIDEND.

The seventh annual general meeting of the shareholders of the California Oilfields, Ltd., was held on Tuesday, at Winchester House, Old Broad Street, E.C.—Mr. ROBERT BALFOUR, M.P. (chairman of the company), presiding.

The SECRETARY (Mr. F. W. BISHOP, F.C.I.S.) having read the notice convening the meeting and the report of the auditors,

The CHAIRMAN moved the adoption of the report and balance sheet. He said: We have now to submit for your consideration and approval the seventh annual report and accounts for the year ended December 31st, 1907. The profit for the year amounts to £171,552 15s. 6d. An interim dividend of 15 per cent., free of income tax, was paid in October last, and we now propose to pay a further and final dividend of 25 per cent., making 40 per cent. for the year. These distributions aggregate £154,000, and we further propose to transfer £10,000 to the credit of reserve account, which will bring the amount at the credit of that account up to £50,000. We brought into the accounts from 1906 a credit balance of £716 6s., and after making these appropriations, the balance remaining to be carried forward to the 1908 accounts will be £8,269 1s. 6d. The dividends, including these distributions, on the old shares aggregate 115 per cent., and on the new shares 40 per cent. All the shares rank equally with respect to the dividends from the accounts for 1907. Although this is our seventh annual report, the period covered thereby is only six and a-half years, for the reason that the date of closing the accounts was altered from June 30th to December 31st, in 1905, and the accounts to December 31st, 1905, covered a period of six months only. It will be observed that the discount and expenses on the new issue of shares and debentures are being written off on a three years' basis, and that interest incurred in connection with the purchase of the properties acquired last year is being similarly dealt with on a two years' basis.

A further purchase of 480 acres, of what is believed to be oil-bearing territory was made in December last, and subsequent developments in the neighbourhood indicate that this acquisition is likely to prove a favourable one. This tract of 480 acres, moreover, adjoins property already owned by the company, and helps to "round off" its holdings, which now aggregate 6,720 acres. Reference is made in the report to an option to purchase an additional section of about 640 acres not so closely adjoining the properties already owned by the company, which was not availed of, and the cost of such option, including expenses, amounting in all to £6,785 3s. 3d., has been debited to profit and loss account. The experimental drillings on this property did not bring out a sufficiently satisfactory result to justify completion of the purchase, largely because the oil sands were found at a comparatively great depth, and the cost of drilling and incidental expenses proved greater than was anticipated when the option was taken. These experimental drillings afforded useful information for our guidance, which compensates us for the loss. During the latter part of 1906 and the early months of 1907 development work was curtailed, for reasons which were explained at our last annual meeting. About the date of that meeting our agents completed the negotiation of large sales of crude petroleum for delivery over an extended period, and active development work was accordingly resumed. This accounts for the material increases in equipment and development account, and operating stores account. Equipment and development account represents expenditure for labour and material—less amounts written off for depreciation on buildings, roads, pipe lines, tankage, derricks, machinery, wells, casing in use therein, and all the equipment of the company with the exception of the items, separately stated, representing animals and implements and house and office furniture. The operating stores account represents material and machinery in stock or in course of delivery, which is available for further development or for repairs and replacements of equipment already in use. It is necessary to carry large stocks of material of varied descriptions, as our supplies are bought, for the most part, in the eastern States and on a wholesale basis, so that they must be secured in advance of requirements. Depreciation with respect to the expenditure under equipment and development account has been provided for on what your directors believe to be a fair and prudent basis. The equipment and development which is represented by this account is probably not overvalued at £92,553 5s. 5d. We do not doubt that the shareholders will approve of the policy of building up reserve account. The investments have somewhat depreciated in value, but they are of a sound character, and we may reasonably expect that the

depreciation will be reinstated with better times in Stock Exchange securities. In the meantime these investments are yielding a fair income.

We reported at the last annual meeting that the company then had 41 producing wells on the sections originally owned, and that there were 15 producing wells on the properties which had recently been acquired. Our present report states that we now have 59 producing wells, from which it might be inferred that no great progress had been made during the past year; but it was pointed out that some of the wells on the new properties might have to be reconstructed, in order to bring them up to the California Oilfields' standard, and it was found on closer acquaintance that practically all these wells had to be dealt with in one form or another, and the position even now is that only a limited number of them have been brought into the producing list; so that the increase in the number of producing wells is largely made up from new wells completed during the past year on the previously-owned properties. When active development work was resumed a good deal of time was occupied in procuring supplies of material and competent labour, and although the number of producing wells has not materially increased, there are a number of additional wells in an advanced stage, and a large volume of work has been done in reorganising and harmonising the operation of the combined properties. The policy of development, moreover, has led to the drilling of wells of greater depth than heretofore, and this naturally implies greater cost and occupies more time, besides increased risk of unexpected delays and troubles incidental to oil-field development. These objections, however, are usually compensated for by the greater productivity of deep wells. The question of the depth which can be profitably operated is largely governed by the special conditions of each district and, it may be added, by the competence of those in control of the drilling operations. Developments on the new properties tend to confirm the favourable expectations which were expressed with regard to their value when they were acquired. The construction of the new headquarters, referred to in the report, is well advanced. They are more centrally and conveniently situated than the original headquarters, and the transference has been rendered necessary by the acquisition of the new properties. They are sufficiently extensive and so systematically planned as to be entitled to the dignity of being designated as a town, and a post office for the surrounding district is expected to be established by the United States authorities. The company has opened a local store, with the object mainly of supplying their own employes and of obviating the necessity of their going to the town of Coalinga for ordinary requirements.

The headquarters include a concrete office building with a suitable vault; excellent accommodation for the management staff and employes sufficient to house and provide for from 150 to 200 people; an electric light and power plant, a planing mill and brick-making plant, ice-making refrigerator and water-condensing plants, suitable barns for waggons and work-animals (of which there are about 100), and other equipments necessary for the efficient operation of our undertaking. The situation is several hundred feet lower in elevation than the original headquarters, and this in itself implies a substantial diminution in the cost of transporting material for drilling purposes from the railway station at Coalinga, and of distributing same where wanted for use. The equipment of the company is in excellent condition. At the last annual meeting I reported the impressions gathered during my visit to Coalinga in the autumn of 1906. I again spent several months in California during the past autumn and winter, and made two visits to Coalinga, the last about the middle of January. Important developments had been carried out in the intervening period, and the extensive improvements already referred to were being dealt with in an efficient manner. It may interest you to know that Mr. Alexander Guthrie, with whom some of you are acquainted, is now in California. He visited Coalinga towards the end of March, and reports: "March 26th—Arrived at the field, inspected new camp on Section 27, extensive and complete; believe first cost will be justified, as almost every kind of work will be done within the company itself. Excellent quarters for the men and all employes. Within two months or less the transfer from old camp will be made. The location is several hundred feet lower than the old camp, thus reducing haulage, and it is placed so as to serve conveniently the sections where the most active developments are proceeding. My general impressions of the company's field, including the new territory in Sections 34, 14, 26, and 10, are entirely favourable." For reasons already indicated,

our production in the early months of 1907 was restricted. It compares favourably, however, with that for 1906, the deliveries being: For 1907, 3,242,942.44 barrels, and for 1906 2,512,654.58 barrels. The production of the Coalinga district, which has been extended both in a northerly and southerly direction, is fully maintained. The figures are: For 1905, 8,869,000 barrels; for 1906, 8,500,000 barrels; for 1907, 9,855,000 barrels; and it will be noted that the production of our company is about one-third of the total production of this important district.

The production of the State of California diminished materially in 1906 owing to low prices, and, under more favourable market conditions, has increased largely in 1907. The statistics covering recent years are as follow:—In 1902, 13,973,500 barrels; 1903, 24,337,828 barrels; 1904, 28,476,025 barrels; 1905, 35,671,000 barrels; 1906, 30,500,000 barrels; 1907, 40,000,000 barrels; and it is thought that the production will be fully maintained in 1908. Stocks were greatly reduced about a year ago; it is probable that they are now being reinstated. The world's production for 1907 appears to have substantially increased, but it is difficult to obtain reliable statistics. The following comparison with 1906 is probably fairly correct:—United States, 1907, 160,000,000 barrels; 1906, 125,000,000 barrels; Russia, 1907, 60,000,000 barrels; 1906, 60,500,000 barrels; Galicia, 1907, 7,000,000 barrels; 1906, 5,500,000 barrels; Roumania, 1907, 7,000,000 barrels; 1906, 6,500,000 barrels; Sumatra, Java and Borneo, 1907, 10,000,000 barrels; 1906, 10,000,000 barrels; India, 1907, 4,000,000 barrels; 1906, 4,000,000 barrels; sundries, 1907, 2,000,000 barrels; 1906, 2,500,000 barrels; total, 1907, 250,000,000 barrels; 1906, 214,000,000 barrels, shewing a substantial increase in the production of the United States, but no material change otherwise. It is said that the production in the earlier producing States of the United States, such as Pennsylvania and Ohio, is falling off, and that in other States, such as Illinois and Oklahoma, it is increasing, as it has done also in California. Market conditions in the United States are, on the whole, favourable. The value of high-grade petroleum is well maintained, and quotations in Pennsylvania range from \$1.60 to \$1.75 per barrel, while quotations in Ohio and Indiana are 85 cents to 95 cents, in Illinois 60 cents to 70 cents, and in Oklahoma 30 cents to 40 cents. Values are naturally influenced by quality, which varies materially in the different States, and also by proximity or otherwise to large consuming centres. The consumption of petroleum in California—both for fuel and refining purposes—continues large, and considerable quantities of fuel oil are being shipped to North Pacific coast ports, the Sandwich Islands, and to Central and South American ports; also of oil for refining purposes to Japan and of illuminating oil to Oriental ports. The trans-isthmian pipe line has not been made use of so far to any great extent; but it is expected that an increased market may be developed by this route, and in the meantime there is a fairly large consumption at the canal construction works. Producers appear to experience no difficulty in finding an outlet for their increased production at the advanced prices, but the market situation as regards fuel oil is liable to be adversely affected if present depressed industrial conditions continue. These have already led to a material curtailment in the consumption of fuel, railroad requirements, for instance, being considerably reduced for the time being. There is no reason, however, to anticipate that supplies of the useful commodity in which we are interested will be in excess of requirements. At current improved prices it is the cheapest fuel on the market, and as the supply in California of oil suitable for refining purposes is comparatively limited, our own production occupies a preferential position. I now beg to move the following resolution:—“That the report and accounts for the year ended December 31st, 1907, as submitted to this meeting, be received and adopted, and that a final dividend of 25 per cent., free of income-tax, making the dividend for the year 40 per cent., be paid.”

Mr. C. H. MOORE seconded the motion.

Mr. GERALD HODGSON said that he would like to congratulate the shareholders on the excellent report presented. He further wished to thank the board for conducting the affairs of the company so well, and to say he was glad to see that a resolution was to be proposed later to increase the remuneration of the directors, to which he considered they were amply entitled. With regard to the accounts, he would like to know the amount which had been paid for general agency and commission, and whether the commission was payable so much per barrel or a percentage on the proceeds of the sale of the oil. He pointed out that this year that item was omitted from the accounts, as was also the item of fire and accident insurance and taxes. The directors having adopted a certain form of accounts, he thought that they should adhere strictly to it in order that shareholders might be in a position to make a comparison with previous years. He also wished to know what amount had been written off for depreciation, and whether the cost of the

purchase of the 480 acres, mentioned in the report, was included in the item purchase of new properties, £794,308.

The CHAIRMAN, in reply, said that at the last annual meeting he stated that the directors had under consideration the advisability of condensing the details in future accounts, as it was not desirable to give unnecessary information to those who were not directly interested in the affairs of the company. With regard to the agency commission, the agents charged 5 per cent. commission on sales of oil and 2½ per cent. on purchases of materials for the use of the company. The item of fire and accident insurance and taxes was simply omitted in conformity with the statement he made a year ago—namely, that it was not desirable, in the interest of the company, to give too much information. The same remark applied to the question of depreciation, which the directors had dealt with on what they considered to be a prudent and safe basis. Being only producers of oil, it was very difficult to determine how much should be written off; but the directors had been guided, more or less, by the best advice they had been able to get from the representatives of the company in California and by their own personal judgment. The cost of the 480 acres was included in the item mentioned by Mr. Hodgson. There was no desire on the part of the directors to withhold information from the shareholders. Personally, he wished the company to have a long and prosperous career, and he thought that could be best secured by adhering to the policy which the directors had followed during the past year. The board would consider the desirability of publishing information periodically as had been suggested.

The resolution was then carried *nem. con.*

The CHAIRMAN proposed that Mr. Archibald Williamson, M.P., and Mr. John Halliday be re-elected directors of the company.

Mr. J. S. HARMOOD-BANNER, M.P., seconded the motion, which was unanimously agreed to.

The auditors were then re-appointed, and a vote of thanks was passed to the general manager, the agents, representatives, and staff in California.

Mr. JOHN LAWSON, in acknowledging the vote of thanks, said that the chairman during his periodical visits to California, was untiring in his efforts to promote the welfare of the company. Having just come from California, he (the speaker) could assure the shareholders that the staff there had been working under considerable pressure during the last two years. Although local reasons had rendered the working somewhat difficult, still development had been great. As regarded the market for the company's product, there was no reason to think that the production would outstrip the consumption, or that there would not always be a satisfactory market for their product.

An extraordinary general meeting was then held for the purpose of considering a resolution dealing with the remuneration of the directors.

The SECRETARY having read the notice,

The CHAIRMAN said: At the last annual meeting I asked that consideration should be given to the augmentation of the directors' fees, which were fixed by the articles of association at £200 to each director and £300 to the chairman, or £1,100 in all. I took occasion to point out that the duties and responsibilities of the board had increased materially in consequence of the prosperity of the company, and that they would still further increase owing to the enlargement of capital and the purchase of additional property. The original issued capital amounted to £250,000, whereas the present market value of the enlarged capital and debentures is about ten times that amount. Under the circumstances we venture to hope that it will not be considered unreasonable if we ask you to authorise that our fees be doubled, such authority to be retrospective with respect to the accounts for the year 1907, and I now beg to move the following resolution:—“That the articles of association of the company be, and they are hereby, altered as follows: By cancelling Article 72, and substituting therefor the following article: ‘There shall be paid to the directors as from January 1st, 1907, the yearly remuneration of £2,200, divisible amongst them as they may determine, and in default of such determination, equally.’”

Mr. HODGSON seconded the resolution, which was carried unanimously.

On the motion of Mr. F. H. NORMAN, a vote of thanks was accorded the chairman and directors, and the proceedings terminated.

The Heywood Oil Company.—The annual meeting of the Heywood Oil Co. was recently held at Beaumont, when a most satisfactory report was presented. The total assets of the company are placed at \$985,808, of which \$260,000 is taken up in Oklahoma leases and investments. After paying all liabilities, a surplus remained of \$183,617.

Taking Gasoline from Natural Gas.



Specially Contributed to the "Review"

BY

Mr. A. S. COOPER and Mr. H. N. COOPER.

Atmospheric air is composed of the gases oxygen, nitrogen, carbon dioxide and a small quantity of other gases. Natural gas consists in varying proportions of the gases methane, nitrogen, carbon monoxide, carbon dioxide and oxygen. Under certain conditions, the gases contained in the air and natural gas will hold in solution the lighter parts of petroleum oil. When natural gas or air are passed through gasoline, some gasoline is taken up in solution. The quantity taken up depends upon the pressure and the temperature of the natural gas or air, while in contact with the gasoline.

If natural gas or air are passed through crude oil, the lighter parts of the oil will be carried away by the gas or air. The lighter parts of the oil can be recovered by methods stated below.

Laboratory experiments: To a 1 gallon bottle of air was added exactly one-fifth of gasoline, of the so called 74° B. This gasoline distilled over from 70-75° C. The pycnometer showed that 1 c.c. of the gasoline above used weighed 670 m.g. Therefore the weight of the gasoline admitted into the bottle of air was 134 m.g.

Enclosed in an absorption tube, about 30 c.c. of the lubricating oil called "Atlantic Red" was used as an absorbent, and the gasoline charged air was sucked through the oil. A recovery of 65 per cent. of the gasoline was effected. Thinking this a low figure, a fresh 30 c.c. of "Atlantic Red" was put into a clean absorption tube, and the same amount of air (1 gallon) was sucked through. The "Atlantic Red" gained 12 m.g. in weight, which would raise the above recovery of 65 per cent. to 74 per cent.

A clean absorption tube was taken, and about 30 c.c. of "Glymol" introduced as an absorbent. "Glymol" is a colourless, odourless, practically non-volatile hydrocarbon oil, which is sold in the drug trade as a carrier for medicaments. The sample of "Glymol" used by us commenced to distill at 280° C. The recovery effected by "Glymol" as an absorbent was 77 per cent. Afterwards the "Glymol" was distilled and the pure white gasoline was obtained from it, identical with the gasoline that was introduced into the 1 gallon bottle.

The above experiments were carried on at the ordinary room temperature of about 18° C. A lower temperature would give a greater absorption percentage.

All natural gas found in or near an oil field contains a larger quantity of gasoline than does gas taken some distance away from the oil field. In nature, nearly all natural gas is held in solution with water or oil. It stands to reason that gas coming out of solution from crude oil will carry more gasoline than gas coming out of solution from water. Gas coming from a light oil will yield more gasoline than gas coming out of solution from a heavy oil.

The greater the quantity of gasoline present in gas, the greater its luminosity; consequently, the quantity of gasoline present in gas can be fairly determined by photometry. Gas coming from many wells in California

carry in solution from one-half to one gallon of gasoline to each one thousand feet of gas. The greater the pressure exerted upon a gas, the less gasoline it will hold in solution. The colder the gas, the less gasoline it will hold in solution.

Gas coming from a well under high pressure will not yield as much gasoline as gas coming from a well under low pressure. As before stated, this is owing to the fact that gas under high pressure will not carry in solution so much gasoline as gas under low pressure.

When gas is drawn from a well with pumps, the pressure is less than when the wells flow unassisted.

In many of the Eastern gas fields, gas is drawn from the wells in pumps, frequently a vacuum of twelve pounds to the square inch is produced in the wells. The removal of twelve pounds of atmospheric pressure is equal to the removal of twenty-seven feet of water from the surface of the water in the well. The removal of twelve pounds of atmospheric pressure permits the gas to come out of solution from the water and oil. Cooper's gas lift can remove a greater pressure from the well by removing and keeping removed a large column of water from the well.

A large quantity of gasoline is lost by evaporation through the storage of petroleum oil in tanks. This loss could have been saved by the passage of natural gas through the oil, which would carry away the gasoline in solution, and it could be recovered by one of the methods described below. When petroleum oil or heavy oil with gasoline in solution is heated, gasoline is vaporised and removed. The vapors of gasoline can be condensed by a suitable apparatus.

Gasoline can be recovered from the air or from natural gas, either by refrigeration, compression or absorption.

When natural gas taken from wells is compressed for transportation through pipes, light hydrocarbons are condensed, the greater the pressure the greater the amount of condensations from a given gas.

When natural gas is taken from a well and the pipes conveying it are exposed to the air, light hydrocarbons are condensed, the colder the weather the greater the condensation from a given gas.

When gas containing gasoline in solution is passed through cold heavy oil, the gasoline is absorbed by the oil. The gasoline can be recovered from the oil by distillation. The gasoline obtained from natural gas is very limpid, and has but little odour and is of a light specific gravity. As the demand for gasoline is constantly increasing, this character of gasoline will always be worth at least fifteen cents a gallon. The natural gas, which has been deprived of its gasoline, can be used to operate the apparatus by means of which the gasoline is abstracted from the gas. A plant can be arranged so that only one man will be required to operate it.

Working models employing the methods given above have been constructed by the authors.

One model employs compression and refrigeration, and the other absorption by heavy oils. Both of these models demonstrate the fact that gasoline can be taken from natural gas in commercial quantities and at a profit.

GERMAN IMPORTS OF PETROLEUM PRODUCTS.

STATISTICS FOR THE FIRST QUARTER OF 1908.

The following are the quantities of various petroleum products imported into Germany during the first three months of 1908 (in tons):—

	First Quarter, 1908.	First Quarter, 1907.
Illuminating oil	365,114	342,346
Lubricating oil	55,778	61,552
Crude benzine	23,418	30,349
Refined benzine	2,255	1,855
Heavy benzine	57	3
Crude oil	9,596	5,510
Residuals	184	60
Gas oil	7,674	2,369
Patent turpentine and other mixtures	210	290
	464,286	444,334

The imports from the various producing countries were as under:—

	Three months, 1908.	Three months, 1907.
U.S.A.	341,812	320,972
Austria-Hungary	51,099	37,301
Russia	38,437	51,370
Dutch India	20,091	21,033
Roumania	11,470	12,024
Other countries	1,377	1,734
	464,286	444,334

The exports of various products from Germany during the first quarter of 1908 were:—

	Three months, 1908.	Three months, 1907.
Illuminating oil	226	108
Lubricating oil	2,613	2,321
Residuals	254	664
Crude oil	—	6
Crude benzine	125	4
Refined benzine	1,204	964
Patent turpentine, etc. ..	1	10
	4,523	4,077

The imports of ozokerite in the first quarter of 1908 amounted to 328 tons, of which 295 tons came from Austria. The exports of ozokerite during the same period amounted to 219 tons.

DEVELOPMENTS IN THE FERGHANA OIL FIELDS.

The only producing oil field in the Province of Ferghana, in Russian Turkestan, continues to be Tchimion, which is 20 versts distant from the Vannovskaia station. The production of crude oil there in 1907 amounted to 3,600,000 poods. The production was taken from two plots, but trial borings are now in progress on a plot three versts away from the producing plots. The twenty-first borehole has just been started; boring is in progress in three wells. During the winter three wells were deepened beyond the known oil level, and the deepest of these has reached 1,757 feet. The completion of one well now in drilling and the starting of several new wells is expected shortly. The daily production until quite recently kept at 7,000 to 8,000 poods the best producing well yielding about 4,000 poods.

The Tchimion Co. unfortunately did not start any new wells for ten months, which resulted in a reduced output. From last September the petroleum refinery has been working intermittently, and the products obtained are of good quality.

It is reported that Mr. Khilkoff is about to commence development work on his concession at Maili-Sai. The absence of a good road in that locality is a serious obstacle. The projected Namangan-Kokand Railway, promoted by Mr. Kovalevsky, would prove a great help, but its realisation is still very doubtful.

The Central Asian Co., a new concern which has taken up a property in the locality of El-Roché is about to commence drilling for production; hitherto they were only making trial borings. On the property of the Bitum Co. in the Kamyschi-Bashi district a third well is being started. The Neft Co. of Baku is preparing to start trial borings on several concessions taken up by them. The other firms, the Turkestan Co., Rishtan Co., and Alexeieff Bros., are inactive; with the exception of the Tchimion Co., none of the above-mentioned firms have any production.

Anglo-Mexican Oilfields, Ltd.—We are informed that the Hon: Chandos S. Stanhope (director of the Inter-oceanic Railway of Mexico, Ltd.) has joined the board of the Anglo-Mexican Oilfields, Ltd.

Telegraphic Address:—"OLEINE."

Telephone Nos.:—{ 249 & 254 LIVERPOOL.
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THE BURMAH OIL COMPANY, LIMITED.

SIXTH ORDINARY GENERAL MEETING.

The sixth annual general meeting of the members of the company was held within the Masonic Hall, 100, West Regent Street, Glasgow, on Wednesday, the 29th of April—Mr. JOHN T. CARGILL presiding.

The CHAIRMAN intimated that letters of apology had been received from Mr. Leonard Gow and Mr. Robert Gourlay, and he laid on the table certificate that the notices calling the meeting had been duly posted, together with the proxies received.

After obtaining the approval of the meeting to the directors' report and balance sheet as read, and the auditor's report being read by the Secretary, the CHAIRMAN made the following remarks:—

It is a source of great pleasure to me to be in the position of submitting to you to-day such a satisfactory report and statement of accounts for the year 1907. As will be seen from the profit and loss account the net profit for the year amounts to £608,095 18s. 6d., which compared with £389,094 18s. 11d., the net profit for 1906, shews the substantial increase of £219,000 19s. 7d. This gratifying result is to a large extent due to the fact that the oil trade of India has continued throughout the year in the satisfactory and healthy condition to which I referred at the last annual meeting, prices having been well maintained and consumption continuing to expand materially. In addition, the throughput at the refineries was the largest in the history of the company, and prices of products as a whole were on a higher level than during the previous year.

In dealing with the profit at their disposal the directors have continued their policy of not only providing liberally for depreciation in every direction but also consolidating and strengthening the company's position by building up a strong general reserve, and they feel confident that their proposal to place £200,000 to that fund, thus bringing it up to £540,000, will meet with the hearty approval of the shareholders. The sum of £25,000 has been placed to the insurance fund instead of the customary £15,000, bringing the amount at the credit of that account to £100,000, and the marine insurance fund now stands at the satisfactory figure of £39,395 19s. 11d.

In connection with the prospecting operations for fresh oil-bearing territory which have been carried on with unabated vigour throughout the year, as stated in the report, encouraging results have recently been obtained in a new district of Burma, and there seems to be good grounds for hoping that this new territory will prove a valuable addition to the company's holdings. As was done in 1906, cost of all development work and expenditure on fields abandoned during the year have been written off, and the sum of £85,000 has been added to the field reserve account, making £170,000 at the credit of that account.

So far no success has attended the operations of the Concessions Syndicate, Ltd., in Persia, and, in addition to utilising a substantial profit made on investments realised during the year for the writing down of the remaining investments, the directors have considered it a prudent measure of precaution to apply a further sum of £10,000 to this purpose, in view of the possibility of failure and in that case abandonment of this enterprise.

The sum of £57,492 14s. 6d. was expended during the year in additions and improvements at the refineries, the major portion of this being represented by the final expenditure on the navy fuel plant. The first cargo—about 7,000 tons—of this fuel was landed by the Admiralty at Thames Haven about the middle of February this year.

The allowance of £67,979 12s. 6d. for depreciation on refineries is, the directors consider, ample, as is also the amount, £55,618 1s. 9d. set aside for depreciation of the company's tankers, tank installations, depôts and distributing facilities, on improvements and additions to which the sum of £290,027 18s. 4d. was spent during the year.

The five tank steamers have been kept constantly employed throughout the year carrying the company's products to its various Indian installations, and they have again enjoyed immunity from any accidents of a serious nature.

The laying of the main pipe line, which was commenced in the month of July last, has been carried on with great energy, and by the 31st of last month no less than 236 miles, out of the total of 275, had been laid, and it is anticipated that the line will be in full working order before the end of the present year.

The amount of cash on deposit and in bank, £887,488 11s. 4d., shews an increase of £95,651 9s. 6d. as compared with 31st

December, 1906, and the amount, £32,858 9s. 2d., contributed by interest account to the profits, reflects the very satisfactory rates obtained on deposit during the greater part of the year. In view of the cheapening of money and the much lower rates now ruling for money on deposit, the directors have had under consideration the investing of some of this cash in high-class securities, and have recently invested about £150,000 at what appear to be very favourable prices. In view of the comfortable cash position of the company, the directors decided to repay the £100,000 of 5 per cent. terminable debentures as they fell due, and to the extent of £42,150 these have been repaid during the year.

In order to preserve the closest possible touch between the directors at home and the work abroad, Mr. James Hamilton—our manager and also a member of the board—paid a visit to Burma during the past winter. He took the opportunity of also visiting a few of the principal among our numerous distributing installations in India, and you will be glad to hear—as we were all glad to hear—that he was much impressed by and thoroughly satisfied with the property of the company at the oil fields, at the refineries and at the distributing centres; also with the high state of efficiency of all the company's vast organisations, the smoothness with which everything worked, and with the zeal and devotion to the company's interests of the *personnel* in the East. In this connection I would ask you to authorise me to convey to the managing agents in Rangoon and our agents in India, to the staff at the works and at the fields, and to the officers of the fleet—all of whom have performed their duties to the entire satisfaction of the board—your hearty thanks for the splendid work they have done on behalf of the company during the past year.

As regards the current year, I am glad to say that the outlook is favourable. So far as the year has gone we have done well. Prices are on the whole being well maintained, and all our products are going steadily into consumption, and I am hopeful that in due course the directors will be able to submit another satisfactory statement of accounts. We have again the pleasure of having our technical adviser—Sir Boverton Redwood—with us to-day, and as I know that you will be pleased to hear a few remarks from him on the work done by the company during the past year and its resources at the present time, I now ask him to address you.

SIR BOVERTON REDWOOD then addressed the meeting. He said: I trust that the dangers attendant upon conspicuous prosperity will not be lost sight of by you. The world at large and even the shareholders only see the results, and have no means of estimating the burden of anxiety which must of necessity be continuously borne, through good times as well as bad, by those who are responsible for the administration of the affairs of this great company. It is only those who have had long practical experience in such work who can appreciate all that is involved in the maintenance of the position of such an organisation. The foundation of this company's prosperity and the primary source of the handsome dividends which you are enjoying is, of course, an ample supply of crude oil, and your directors would find it difficult to convey to you an adequate impression of all that is involved in keeping this up. It is not simply a question of obtaining from the most prolific portions of your developed oil lands the very large quantity of oil which your refineries are daily converting into commercial products, though this alone would demand no little technical skill. Much more is needed to safeguard the interests represented by the large capital which you have invested in this industry; for the future—and not only the immediate future—has to be kept in view and it is only by having considerable areas of tested oil lands in reserve that you can be secured against a shortage of supply of the raw material which would quickly depreciate the value of your shares. Fortunately you have a board of directors who have shewn a determination to take no risks in the direction I have indicated, for, apart from the wise policy demonstrated by the statement of accounts, an unusually large amount of costly exploratory work has been continuously carried out, and the knowledge which your directors have thus acquired affords the best possible guarantee for the future prosperity of your undertaking. It is only, however, by strict adherence to this policy that a business of such magnitude can be maintained in a sound condition, and it is hoped the Government will in the future afford to your company even greater facilities for it. I confess that I am not altogether without apprehension that the results upon which you are to-day congratulating yourselves may cause it to be thought that the business in which you are engaged is less uncertain in character and less difficult than I know it to be and

that there may thus be some disposition to regard your company as unduly favoured. I therefore consider it absolutely essential to point out on the present occasion that—although the operations of your company have, through the remarkably skilful and prudent management and vigilant unremitting care, been highly profitable—the work has been carried out in such a fashion as to increase proportionately the established value of the oil fields of Burma as a national asset. I consider, therefore, that your company has unquestionably done as much for your country as for yourselves, apart from the immediate benefit to the revenue of Burma, and, in a sense, therefore, I regard your company's prosperity as a measure of the extent of your just claim upon the Government for such further facilities as the continuance of the present policy of your board may require.

The CHAIRMAN then proposed the adoption of the report of the directors and audited statement of accounts, including balance sheet and profit and loss account to 31st December, 1907.

After Mr. INNES had formally seconded the resolution, the CHAIRMAN called for questions or comments on the part of the shareholders. In response, Mr. MAYBERRY enquired with reference to the paragraph in the report as to the additional remuneration voted to certain of the directors at last annual meeting, whether it was competent to vote the directors additional remuneration without notice of the intention to propose a resolution to that effect having been given in the notice convening the meeting. In reply to the Chairman, the LAW AGENT stated that, in his opinion, it was competent to do so in view of the terms of the company's articles of association.

No shareholders having risen to ask further questions or make observations, the CHAIRMAN formally put to the meeting the resolution already proposed and seconded, and it was unanimously adopted.

On the motion of the CHAIRMAN, seconded by Mr. ROBERT RULE, the following dividends and bonus recommended by the directors were approved of and declared, payment thereof to be made on 4th May, 1908:—

1. On the first preference shares of £1 each—
7½d. per share (equivalent to 6 per cent. per annum from 30th June to 31st December, 1907), under deduction of income tax at 1s. in the £.
2. On the second preference shares of £10 each (1905 issue)—
6s. per share (equivalent to 6 per cent. per annum from 30th June to 31st December, 1907), under deduction of income tax at 1s. in the £.
3. On the second preference shares of £10 each (1907 issue)—
3s. per share (equivalent to 6 per cent. per annum from 30th June to 31st December, 1907, on the amounts then paid up), under deduction of income tax at 1s. in the £.
4. On the ordinary shares of £1 each.
 - (a) 1s. 6d. per share (equivalent to 15 per cent. per annum from 30th June to 31st December, 1907, free of income tax, making, with the interim dividend paid in November last, 15 per cent. for the year; also,
 - (b) A bonus, free of income tax, of 3s. per share (equivalent to a further 15 per cent. per annum).

Mr. T. P. PURDIE moved and Mr. MAYBERRY seconded a resolution that those of the directors who were not remunerated otherwise than by their ordinary directors' fees should receive an extra £200 each for their services for 1907, and this was agreed to unanimously.

Messrs. John T. Cargill, C. W. Wallace, and Leonard Gow were re-elected as directors. Mr. R. A. Murray, C.A., was re-elected as auditor of the company, his remuneration to be 150 guineas.

This being all the business, the CHAIRMAN thanked the shareholders for their attendance, and the proceedings closed with a vote of thanks to him for his conduct in the chair.

Safety from Fire and Explosion.—A demonstration was recently given before press representatives and of the Public Departments, including the Admiralty, Home Office, War Office, London County Council, Fire Brigade, etc., of the utility of the Safety Non-Explosive Reservoir, a device known as the "Snercold," which, when attached to receptacles used in storage or transport of inflammable liquids, such as petrol, benzine, ether, etc., eliminates all risk of explosion. Most exhaustive experiments were successfully carried out—Colonel Willoughby Wallace, C.M.G., demonstrating—even to pouring out of petrol from one can, while the vapour was burning, into another can containing petrol. The cans were fitted with the "Snercold" safety device, and proved absolutely safe from explosion. The London Fire Brigade has all petrol receptacles fitted with this safety device, and firms dealing with highly inflammable liquids are having their tanks, barrels, etc., protected by the same, the use of which is made compulsory by law in Germany, Austria and Hungary.

AMERICAN PETROLEUM EXPORTS.

STATISTICS FOR MARCH.

According to the official publication of the Washington Bureau of Statistics, the exports of petroleum from America from the various ports during March were as under:—

	1907. Quantities. Gallons.	1908. Quantities. Gallons.
CRUDE—		
Baltimore	—	—
Boston and Charlestown..	—	—
Delaware	—	—
New York	4,040	65,000
Philadelphia	4,894,670	5,668,205
Galveston and Sabine ..	759,667	2,152,372
Totals	5,658,377	7,885,577
Total value for the month, 1907 ..	..	\$326,345
" " " 1908 ..	..	\$451,911
NAPHTHAS—		
Baltimore	—	1,702
Boston and Charlestown..	—	1,000
Delaware	—	—
New York	573,764	652,966
Philadelphia	1,575,157	9,500
Galveston	—	3,087
Totals	2,148,921	688,255
Total value for the month, 1907 ..	..	\$231,004
" " " 1908 ..	..	\$109,010
ILLUMINATING—		
Baltimore	298	2,671,250
Boston and Charlestown..	79,876	2,852
Delaware	—	—
New York	37,624,125	56,406,824
Philadelphia	25,057,726	20,461,828
Galveston	30,360	5,979,018
Totals	62,792,385	85,521,772
Total value for the month, 1907 ..	..	\$4,271,649
" " " 1908 ..	..	\$6,156,618
LUBRICATING—		
Baltimore	503,720	417,267
Boston and Charlestown..	11,370	22,587
Delaware	—	—
New York	8,011,444	10,069,150
Philadelphia	3,871,341	4,838,354
Galveston	10,800	13,854
Totals	12,408,675	15,361,212
Total value for the month, 1907 ..	..	\$1,522,155
" " " 1908 ..	..	\$1,941,930
RESIDUUM—		
Baltimore	—	—
Boston and Charlestown..	10,000	—
Delaware	—	—
New York	38,137	—
Philadelphia	2,747,541	1,248,557
Galveston	1,163,011	1,955,938
Totals	3,958,689	3,204,495
Total value for the month, 1907 ..	..	\$124,805
" " " 1908 ..	..	\$111,474
TOTAL MINERAL OILS—		
Baltimore	504,018	3,090,219
Boston and Charlestown..	101,246	26,439
Delaware	—	—
New York	46,251,510	67,193,940
Philadelphia	38,146,435	32,226,444
Galveston	1,963,838	10,104,269
Totals	86,967,047	112,641,311
Total value for the month, 1907 ..	..	\$6,475,958
" " " 1908 ..	..	\$8,770,943

PETROLEUM IMPORTS INTO YOKOHAMA.

The imports of petroleum into Yokohama during February were 741,253 gallons and valued at 148,556 yen, as compared with an import of 673,819 gallons in February, 1907, and a value of 135,178 yen.

THE OIL FIELD OF VIRGIN CITY, UTAH.

A GEOLOGICAL SURVEY REPORT.

A geological survey report has recently been issued by the United States Survey, which will be of great interest to those who are following the operations in the new territory of Virgin City, Utah. The examinations have been carried out by Mr. G. B. Richardson, and will tend to correct misapprehension regarding the field itself and the character of exploitation.

The report in the first place deals with the situation of Virgin City, which is on Virgin River in Washington county, in the south-west corner of Utah, and is distant about 90 miles by road from Lund, the nearest station on the San Pedro, Los Angeles and Salt Lake Railroad. The new oil field is in the Plateau province, near the eastern boundary of the Basin Ranges. The country rises north-eastward from an elevation of about 3,250 feet at Virgin City to over 10,000 feet on the crest of the plateau 30 miles distant. The ascent is accomplished by successive benches which rise steplike one above another. This region is drained by Virgin River and its tributaries, which for many miles flow through steep narrow canyons among some of the grandest scenery on the continent.

This portion of the Plateau province, continues the bulletin, is underlain by almost flat-lying strata which range in age from carboniferous to eocene. The several formations are distinctly marked lithologically and are characteristically coloured so that they can be readily distinguished. They outcrop in broad belts extending in a general east-west direction, the harder rocks forming escarpments and the softer ones the intervening stretches. The oldest formation in the Virgin City region is a thick, massive grey limestone of upper carboniferous age which underlies the broad plateau between Virgin River and the Grand canyon of the Colorado. Above this limestone is a mass of red beds of variable thickness in the vicinity of Virgin City approximating 3,000 feet. These are in the main soft, thin-bedded rocks, chiefly argillaceous and calcareous shales, with some beds of sandstone and limestone. The group of red rocks is separated into two distinct parts by a formation composed of grey sandstone and conglomerate, which in the area considered is less than a 100 feet thick, though in Arizona it is reported to be much thicker. Occurring between softer rocks, this siliceous formation is prominent and commonly constitutes a broad bench capping the underlying beds in a scarp, while the upper softer rocks have been eroded from the platform and form the slope of the next succeeding escarpment. The rocks beneath the prominent sandstone and conglomerate are probably of Permian age, and the conglomerate, with the overlying red beds, is considered to be Triassic. The lower red beds are the oil-bearing rocks.

Above the soft red beds there is a great development of sandstone, which in this region is about 2,500 feet thick. The lower part of this sandstone is characteristically dark red; the upper part is peculiarly cross-bedded and is of a prevailing light colour. This great mass of

sandstone is the most conspicuous geologic feature of the region. It forms prominent cliffs which can be followed for many miles and through which deep canyons have been cut.

The sandstone is succeeded by about 1,200 feet of generally soft vari-coloured beds, including reddish and green shales, white limestone and gypsum of Jurassic age. These rocks are commonly eroded into badland topography. They are overlain by about 3,000 feet of buff and grey sandstones and shales which contain workable beds of coal and are of Upper Cretaceous age. Above these rocks are vari-coloured shale, sandstone and limestone of Eocene age, which outcrop in the Pink Cliffs and cap the summit of the high plateaus.

Although the rocks of the plateau region in the vicinity of Virgin City are prevailingly sedimentary, there are small areas covered by basaltic lavas of post-Eocene age.

The strata in general dip north-eastward at a low angle, averaging possibly between 1 degree and 2 degrees. The continuity of the beds is broken, however, by a number of faults trending in general north and south, some of which have displacements of 1,000 feet or more. One zone of dislocation extends approximately along Hurricane Cliff, through which Virgin River cuts its way about seven miles below Virgin City. This zone of fracture has been traced from the Grand Canyon to Virgin River and northward along the western base of the plateau in the vicinity of the Mormon settlements of Torquerville, Belleview, Kanarra and Cedar City. Along portions of this zone, especially between Cedar City and Kanarra, the strata are much disturbed and are steeply tilted. Another conspicuous line of disturbance extends along the headwaters of Virgin River in what is known as Long Valley.

The carboniferous limestone outcrops a few miles west of Virgin City and the town is immediately underlain by the Permian red beds, in which Virgin River has cut a relatively broad valley. The overlying sandstone conglomerate formation marks a prominent bench north, east, and south of the town, beyond which to the north and east, the upper red beds slope up to the base of the escarpment made by the massive red sandstone.

Oil seeps have long been known in the vicinity of Virgin City. One of them occurs close to the river, about one and a-half miles west of the town, and it is reported that the existence of this seep was the cause of sinking the discovery well in the summer of 1907. This well is located in the flood plain of North Creek, a tributary of Virgin River, about two miles north of Virgin City. The boring was started in the lower red beds, and apparently did not pass through them, though it must have stopped not far from the bottom of the formation, near the carboniferous limestone. A complete record of the drill hole was not kept. Oil was struck on July 13th, 1907, at 566 feet below the surface, and the

well was sunk to 610 feet. The oil is reported to stand in the well 300 feet below the surface, thus being under pressure sufficient to cause it to rise 266 feet. A few hundred barrels are said to have been pumped when work was stopped by a flood on July 27th.

In January fifteen oil rigs were in the field, but only four were being operated. Seven wells had been sunk supposedly to the oil horizon, and some oil was found in each, but none are as good as the discovery well, which is reported to produce about 10 barrels in 24 hours. Claims have been staked far and wide, but oil has not yet been reported outside of the immediate vicinity of Virgin City.

The occurrence of petroleum in red beds is unusual. Such beds in general are believed to have accumulated in bodies of water in which there was little life, for the presence of much organic matter would tend to reduce the ferric salts of the pigment to more sombre-coloured compounds. If barren conditions existed in this area during the deposition of the red beds, the source of the petroleum probably must be sought in the decomposition of organic matter in the underlying carboniferous limestone.

A small sample was collected by the writer from an open vat in which the oil had been exposed to the weather for a week or more. This sample was examined by David T. Day, who reports that it has a specific gravity of 0.9225, equivalent to 22° B., and that it contains some paraffin, a large percentage of asphalt, and apparently considerable sulphur, including hydrogen sulphides. A larger sample, received by Dr. Day, was analysed by him with the following results:—

Colour—Black.

Odour—Hydrogen sulphide.

Specific gravity—0.918=22.5° B.

Results of distillation:—

Sample began to boil at 60° C.

Distillate obtained:—

	Per cent.
Below 150° C., gasolene and naphtha	2.1
Between 150° and 300° C., illuminating oil (specific gravity, 0.784)	19.5
Residue (specific gravity, 0.9475)	78.4

Examination of the gasolene and illuminating oils obtained above shewed both to be principally saturated hydrocarbons, probably chiefly of the paraffin series. Examination of the residue shewed it to contain 49.7 per cent. of asphalt and 29.4 per cent. of paraffin wax, the remainder consisting of heavy oils and resinous material. From the above it is evident that, though a satisfactory illuminating oil can be obtained from this Utah crude petroleum, the yield is comparatively small, and the petroleum is better suited to use as a fuel oil. This rendered the determination of the sulphur advisable, and by Carius' method the result was 0.45 per cent. Much of this was in the form of hydrogen sulphide, easily separated by steaming, hence the oil is preferable for fuel purposes to Texas oil. The percentage of sulphur obtained is lower than that found by other analysts, the difference being probably due to the fact that this sample was taken from a barrel which had been standing a month or more since taken from the well.

The encouraging news that petroleum of a fair grade was found in promising quantity in the first well is offset by the fact that six others have been sunk without encountering oil in paying amounts. Yet, considering the present scanty knowledge of the conditions, little can be predicted concerning the future of this field. Whether oil exists here in profitable amount can be determined only by the drill. To judge from what is known of the geology, the general conditions are not unpromising, although there are unfavourable complications. In many oil-bearing areas an anticlinal structure has prevented the escape of petroleum stored in the rocks, but the strata here are not folded; moreover, the virgin field is traversed by profound faults that possibly provided means of escape for oil that may have been present. The thickness of the oil-bearing stratum, which appears to be a layer of sand in the lower red beds, has not been reported and whether or not it is persistent over a wide area is undetermined. However, the stratigraphy of the lower red beds is known to be varied and it is probable that the oil-bearing rocks occur as lenses rather than as persistent beds. If the petroleum has accumulated in lenses of porous sandstone the surrounding relatively impervious shale would tend to prevent its escape, so that under the circumstances this possible mode of occurrence of petroleum in the virgin field is fortunate rather than otherwise. But, on the other hand, such hypothetical reservoirs cannot be predicted by surface indications and an unusually large element of chance confronts the prospector.

In prospecting in the possible eastward continuation of of this field, the outcrop of the massive red sandstone that lies above the red shale will serve as a valuable aid. It would be futile to attempt to strike the Virgin City oil horizon in wells situated above this formation, because of the great thickness of the rocks that would have to be penetrated. The sandstone conglomerate formation that separates the upper and lower red beds is also an important horizon marker in following the oil-bearing rocks. It should be borne in mind that the Virgin City oil occurs in the red beds beneath this siliceous formation, which usually is conspicuous.

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NOTES FROM ALL QUARTERS.

RUSSIA.

Production Statistics.—The production of crude oil in the first half of April amounted to 16,460,408 poods, to which the Bebe-Aibat field contributed 4,795,689 poods. There were no spouters.

Government Land Production.—The quantity of crude oil produced on Government lands at Baku worked on a royalty basis in February amounted to 15,513,228 poods, and the total for the first two months of 1908 was 33,365,078 poods.

The Czaritzin Market.—A report from Czaritzin, on the Volga, describes the market there in petroleum products as absolutely stagnant. On the 14th of April, Nobel and the Mazout Co. lowered their price for kerosene from 115 to 110 copecs per pood. The prices for other products remain unchanged.

Liquid Fuel Contracts.—The Nicolaieff Railway, on the 17th of April, gave out contracts for the supply of liquid fuel to the extent of 5,000,000 poods. Of this quantity the Mazout Co. secured 3,000,000 poods and Assadulaeff 2,000,000 poods. The price is 36 copecs delivered at Nijni-Novgorod, and 37½ copecs if delivered at Rybinsk.

To Prospect in Ferghana.—Mr. V. Alexeieff has obtained a concession for prospecting during three years for oil or five plots of land of an aggregate area of 76 acres in the locality of El-Roch, in the Province of Ferghana. If oil is found Mr. Alexeieff is to have the rights to exploit half of the area of each plot, and pay a royalty of 20 per cent., payable in kind or cash at average market price.

A Projected Tiflis Pipe Line.—The Tiflis Town Council has received an application from Mr. Alexandroff, of Baku, for permission to lay a pipe line for kerosene from Navtluga railway station near Tiflis to certain points in the town. This is expected to materially reduce the cost of kerosene at Tiflis, where some 450,000 poods is consumed per annum. It is believed that the Town Council intend to build themselves and control the pipe line.

To Exploit at Ramany.—Messrs. Krassilinkoff have obtained from the Russian Government the lease of plot No. 78 at Ramany, having an area of about a quarter of a dessatine, for the exploitation for petroleum. The Government is to receive a royalty of 40 per cent. of the production, and the minimum obligatory annual production is 112,500 poods. This lease is to terminate at the same time as the leases held by the same firm of plots Nos. 33 and 34 in the same field.

"Daylight Robbery."—At noon on April 24th the cashier of the Caspian Society, who had on him 24,000 roubles to pay wages and was escorted by four soldiers, was attacked at Balakhany and killed by armed robbers. Two of the soldiers were also killed, and the remaining two were severely wounded. Simultaneously an attack was also made on the cashier of the Balakhany Co., who was escorted by two policemen, and was robbed of 2,900 roubles, but was not personally harmed.

AMERICA.

Important Illinois Deals.—It is reported that many important deals in oil lands are about to be consummated in Illinois which will involve a payment of close upon \$7,000,000.

Fire near Beaumont.—The Security Oil Co. has recently lost by fire one of their large storage tanks situated near Beaumont. At the time it contained about 45,000 barrels of crude naphtha.

Crawley Oil Company's Dividend.—The twenty-fourth ten per cent. dividend of the Crawley Oil and Mineral Co. has recently been declared, making in all a total disbursement of \$460,000 upon the \$200,000 stock of the company.

Production in Canada.—The output of the Tilbury field in Canada during March is reported to have been 16,000 barrels as against 17,000 barrels for February, while in the Romney field, where the wells are very shallow, the yield was slightly in excess of 2,000 barrels.

Oklahoma Lease Terms.—It has now been definitely decided to change the form for Oklahoma leases, so as to make the royalty determinate, this now being fixed at one-eighth instead of one-tenth as heretofore. The Department of the Interior has reserved to itself the right to raise it to one-sixth at its discretion.

Jennings Production Increases.—The production of the Jennings field continues to increase, and is now estimated at 25,000 barrels daily, the increase over the amount previously reported being due to the bringing in of a 4,000 barrel well by the Producers' Oil Co. on the Latreille 40-acre tract. The well came in under compressed air, but was soon flowing on its own account.

A New Texas Refinery.—Another refinery is shortly to be erected at Texas City, near Galveston. The promoters of the enterprise are well known oil men who have production of their own in the Mid-Continent fields. The plans are for a refinery with eight stills capable of treating some 1,200 barrels of crude every 24 hours. It is stated that the output will be shipped principally to Mexico and the European markets.

ROUMANIA.

The Aurora Co. has contracted a loan of 2,000,000 francs from the Bank of Roumania, on the security of a mortgage on its refineries at Baicoi and Targoviste.

Fire.—During the night of the 26th April well No. 248 of the Concordia Co. was burnt down. One of the drillers sustained slight burns. The cause is believed to be a spark produced by the striking of the baler against the casing.

At Stejar.—The Romano-American Co., having deepened their well No. 4 at Stejar by some three metres, struck a prolific oil stratum at 215 metres. This well now yields 50 tons daily. The Steaua Romana has commenced drilling its well No. 189 in the same locality, and is putting up derricks for three other wells.

The United States Commercial Treaty.—In the Commercial Treaty recently concluded between Roumania and the United States, the Roumanian Government has expressly reserved to itself absolute liberty of action in matters connected with the petroleum industry, to which the most-favoured nation clause is not to extend.

Extending the Producing Area.—Well No. 179 of the Steaua Romana has struck oil at a depth of 245 metres. This fact is of particular interest, as this well is situated to the east of the Bustenari Church, a spot where a few years ago nobody had the courage to drill, thinking it quite outside the oil belt. This well at the start yielded 40 tons daily.

The New Law.—The Roumanian Ministry of Finance has already commenced the preparatory work for putting in force the recently enacted law to regulate the illuminating oil trade on the home market. Mr. Halaceanu has been commissioned to inspect all the refineries and collect the data necessary for fixing the part which is to be allotted to each refinery in the home trade.

A Prolific Campina Well.—Well No. 101 of the Steaua Romana at Campina, which struck oil on the 13th of April, has shewn remarkable fluctuations in the daily yield. On April 13th it yielded 20 tons; on the 14th, 69 tons; on 15th, 61 tons; 16th, 9 tons; 17th, 19 tons; 18th, 245 tons; 19th, 431 tons; 20th, 1,015 tons; 21st, 198 tons; 22nd, 395 tons; 23rd, 562 tons; 24th, 470 tons, and 25th, 420 tons. In the 13th days it has thus produced altogether 3,914 tons, and is still flowing.

Success at Calugareni-Tataru.—The borehole which the Petrolifera Co. is drilling at Calugareni-Tataru has, at a depth of 252 metres, struck a small oil stratum of a thick oil. There being a water stratum about the same depth, the work of shutting off the water is now in progress, and only after this has been accomplished will it be possible to ascertain the value of the oil stratum. The Romano-American Co., who is likewise drilling a well in this locality, has reached a depth of 400 metres without finding any oil.

The Romano-American Co.'s Accounts.—The accounts of the Romano-American Co. for 1907 shew a gross profit of 3,139,012 francs out of which 1,172,527 francs were written off for abandoned boreholes, 505,665 francs was written off the cost of the refinery, storage installations and tank waggons, and 1,210,687 was written off for other items, leaving a net profit of only 250,133 francs. The balance sheet shews the following assets: petroliferous lands, wells, refinery and installations 14,703,710 francs; goods and materials in stock, 5,493,834 francs; sundry debtors, 2,199,702 francs; cash in hand, 376,340 francs. The liabilities include: share capital, 12,500,000 francs; creditors, 9,958,946 francs.

SCOTCH COMPANIES

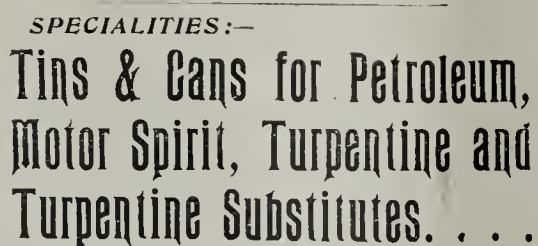
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Dalmeny Oil Co., Ord. (7 paid) ..	£37,800	£8 10s	£5 10s. od.
Do. 5% Pref	£18,900	£7	£4 13s. od.
Oakbank Oil Co., Ltd., Ord. (17s. paid)	£170,000	£1	£1 14s. 3d.
Pumphreston Min. Oil Co., Ltd., Ord. (17s. paid)	£110,500	17s.	£12 5s. od.
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Tarbrax Oil Co., Ltd. Ord. (£1 pd.)	£38,350	£1	£3 2s. 6d.
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Company.	Latest Quotations (per cent.)	Florins
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Aurora " " (Deb.5%)	82 $\frac{1}{2}$	—
Campina Poiana Mij.	—	—
Dordtsche Petroleum Mij. (Pref.)	134 $\frac{7}{8}$	50
" " " (Deb.4 $\frac{1}{2}$ %)	100 $\frac{3}{4}$	1,000
Gaboës " " "	—	—
Holl. Rumeensche Petroleum Mij.	13	1,000
Int. Rum. Pet. Mij.	36 $\frac{3}{4}$	500
Java Petroleum Mij. (Ord.)	—	1,000
" " " (Pref.)	22 $\frac{7}{8}$	—
Koninklyke Nederl. Pet. Mij. Shares	282	250-1,000
" " Share certificates	281	1,000
Mœara Enim Petroleum Mij.	138 $\frac{5}{8}$	100
" " " 1-1,000 Oblig. 5	—	250-1,000
" Moesi Ilir " Petroleum Mij.	—	—
Nederl.-Rumeensche Petroleum Mij.	2 $\frac{5}{8}$	—
Nieuwe Ned. Petroleum Mij. And.	—	1,000
Oliebronnen in Hannover Mij.	50	—
" " " (Deb. 5 %)	90	—
Panolan Maatschappij Cert.	224	—
Perlak Petrol. Mij. (6% cum.pr.A.)	108	1,000
" " " (Common)	—	—
Sumatra-Palembang Petroleum Mij	93 $\frac{3}{16}$	500
Tarakan Petrol Mij.	38 $\frac{3}{4}$	—
Zuid Perlak Petrol. Mij. (Pref.).. . . .	84 $\frac{3}{8}$	—

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THE PETROLEUM REVIEW,

45, St. Mary Axe, LONDON, E.C.

American Office: 150, Nassau Street, New York.

SATURDAY, MAY 9, 1908.

PROGRESS OR RETROGRESSION?

TO the careful student, it must be strikingly apparent that of the many questions that await solution in connection with the petroleum industry, none are of more vital importance than that of the position which oil will occupy in this and other countries in the future as an illuminating agent. For the past quarter of a century, an almost unlimited amount of capital and energy has been thrown into the petroleum industry in

all parts of the world. In every producing country, the industry has been placed upon a thoroughly commercial basis, and the foundations well laid for an ever-increasing trade in petroleum products, while upon the various consuming markets of the two hemispheres, vast organisations have sprung into being, destined either to give increased facilities for the transport of the various products, or for their distribution to the millions of consumers in the most remote parts of almost every country.

In one direction, everything therefore that the mind of mortal man can conceive has been done to ensure the permanent supremacy of the commerce in petroleum products, yet it does not necessarily follow that all the opportunities for the use of those various products have been taken advantage of, and this most certainly does apply in the case of oil either as an illuminant or a heating agent.

For some considerable time, oil as an illuminant held its own among all comers, but the push and energy displayed by those interested in rival agents, combined with the lethargy displayed by those responsible for the distribution of oil in this and other countries, has brought about a diminution of consumption. For a time it did appear that oil, in the face of new competitors, was making some small degree of progress, but we think it can safely be said that even if this were so, that progression was far from being in proportion to the progress made by other illuminants.

Wherever we go we see what an amount of enterprise has been exercised by those responsible for the gas and electric light industry in this country, in order that it may gain a strong hold upon the populace. In the case of gas we are especially struck with the results of the efforts put forward to make it a popular, illuminating, heating and cooking agent. Every possible inducement has been placed before the public, and in this regard the poorer classes have not been overlooked. The prepayment penny-in-the-slot meters have robbed the petroleum industry of many hundreds of thousands of consumers, and consequently a large section of users of oil for lighting purposes has been irretrievably lost. The change has been steady yet continuous, and the result we are just beginning to see.

Even as we write these lines, a pamphlet reaches us in which is urged the more extended use of gas cookers. "My Darkie Friend" is its title, and herein are explained the various reasons why a gas cooker should be installed in every home, while the pamphlet *which has been forwarded to every consumer in London*, is accompanied by a letter from one of our London gas companies urging the cleanliness of gas stoves for heating purposes. Some might argue that such literature does but little good. Of course, this is a pious expression of opinion, but the fact remains that enterprise will win the day, and those who adopt up-to-date methods of thrusting down the throats of the unacquainted, the advantages of either one thing or the other, will profit thereby.

Statistics may help us to understand our last remark more thoroughly. Last year, for instance, we imported into this country no less than 140,000,000 gallons of illuminating oil—admittedly a very large amount, and somewhat larger than that imported for the previous year. This in itself may be food for congratulation, but let us look further back, for if we are really progressing, a retrospective glance should always be comforting. Take the year 1905. Then we imported

160,000,000 gallons of illuminating oil, and this was at a time when oil engines were by far not so popular as they are to-day. Again, in the preceding year, our illuminating oil imports were nearly 180,000,000 gallons—figures which shew to what an extent we are now on the retrogressive movement.

The petroleum industry, we regret to say, has shut its eyes to the important fact that competition must be met at any cost, or ground will be lost. It has failed to arouse itself to recognise that something must be done to first make the merits of oil as a cheap lighting, heating and cooking agent more widely known, and then to keep these merits constantly before the public, and the consequence is that both gas and electricity have reaped a substantial benefit to which oil is justly entitled.

Opportunities have been repeatedly lost, and if we want an instance let us look at the great Franco-British Exhibition which opens its doors to its 30,000,000 patrons in a few days. The advantage of a section exclusively devoted to the oil trade would have been of incalculable benefit to all concerned, but lethargy has knocked this suggestion on the head, and once again the claims of oil will not receive their due publicity.

Argue about the question as much as you like, there is no gainsaying the fact that oil as an illuminant has lost many opportunities, and is to-day becoming less used both by the rich and poor, and if the retrogression is not prevented making serious inroads and undermining the great trade which is being done in the product, the matter will very soon stand out in all its seriousness to the most casual observer. Thus far, considerable loss has followed as a consequence of the fight for supremacy among the illuminants, and this loss is intensified on account of the fact that those who are interested in the industry have stood idly by and contentedly witnessed the fray. Had all the illuminants stood upon their merits, we doubt not that the consumption of illuminating oil in this country alone would be many times greater than it is at present, but this has not been the case.

What a little energy and enthusiasm in the cause would have brought, cannot be over-estimated. Everyone must have artificial light and heat, and a little effort to put forward the claims of oil would bring its own reward in an increased consumption. During the long winter months which we have just passed through, when propoganda work could have been done in every district in the country, it is far from creditable to admit the fact that there was only one gentleman in the United Kingdom interested in the oil trade, who was spirited enough to deliver a lecture dealing with the ever interesting subject of petroleum, its production, refining and distribution. What a glorious opportunity for concerted action is continually being missed! No sacrifice in this direction can be too great, for one of the most important branches of the petroleum industry is threatened. There is a real necessity for something to be done, and unless the matter is taken up in grim earnest, the outlook is gloomy. There may be an unlimited supply of oil, but this will count as little if the demand does not exist.

The matter, too, is of the greatest interest to the producers, and it behoves them equally with the distributors to gird themselves for the fray, and to see, by the institution of lectures, exhibitions and the like, that the claims of illuminating oil reach the ears of those who, under pressure from other directions, are no longer to be counted among the users of illuminating oil.

We hope we do not appeal again in vain.

THE COMING AUCTIONS OF GOVERNMENT PETROLIFEROUS LANDS AT BAKU.

The first meeting of the conference called to consider the terms prepared by the Ministry of Industry and Commerce for the leasing of Government petroliferous lands at Baku, took place on the 21st of April. At the conference there were represented all the Government departments having an interest in the question, and there were also present representatives of the Baku petroleum producers and of the association of petroleum consumers. After the meeting was opened the representative of the Baku Exchange Committee, Mr. Pappe, in a long speech, expounded the views of the petroleum producers on the causes which keep down the production of crude oil and the high prices for same. In Mr. Pappe's opinion these causes are:—(1) the general condition now of the labour question in Russia; (2) the absence of tranquility, which would guarantee the normal course of work at the Baku oil fields; (3) the inadequacy of the measures taken for restoring tranquility; (4) natural exhaustion of the ground; (5) insufficient geological investigation of the petroliferous area.

The causes of the high prices of oil the producers consider to be:—(1) the excessive royalties paid to the Government; (2) the increased cost of labour and of the general expenses connected with the exploitation of the oil fields. In consequence of this the petroleum producers consider that the retention of the old terms for the leasing out of petroliferous lands, even if it will provide a large supply of crude oil on the market, will not reduce the price on it. The representative of the Nijni-Novgorod Exchange Committee urged the necessity for the Government to take the royalties on Government lands in kind and use the oil so received for establishing stocks at Baku and on the Volga, and thus provide liquid fuel for the Volga shipping.

During the discussion in detail of the terms for the leases proposed by the Mining Department, the representatives of the petroleum producers declared (1) that the minimum obligatory production is fixed too high and should be reduced by half; (2) the period within which production is to commence is too short, being in some plots only one and a-half years; this should be extended to three years.

ROUMANIAN PRODUCTION IN MARCH.

The total production of crude oil at the Roumanian oil fields in March, according to provisional figures, amounted to 97,050 tons, against 90,238 tons produced in February. The complete figure for March, when the items still missing will be added, will be about 100,000 tons.

The production of the various fields in March was as under:—

	March. Tons.	February. Tons.
Prahova District—		
Bustenari	40,202	36,980
Campina-Poiana	19,214	18,986
Moreni	28,941	26,002
Baicoi-Tintea	3,886	3,392
Other Fields	1,274	1,306
Total for Prahova	93,517	86,666
Dambovitza District	2,205	2,246
Buzen District	663	671
Bacau	665	655
Total	97,050	90,238

The production of the leading firms in March was as under:—

	Tons.
Steaua Romana	27,478
Regatul Roman Co.	16,770
Romano-American Co.	13,374
Bustenari Co.	10,434
Telega Oil Co.	4,199
Astra Co. (C. M. Pleyte)	3,856
Trajan Co.	3,150
International Co.	2,828
Colombia Co.	2,319
Aquila Franco-Romana	1,815
Alfa Co.	1,655
Nafta Co.	1,458
Secoleanu Bros.	1,001
Arnheemsche Petroleum Co.	763

BATOUM PETROLEUM SHIPMENTS.

The following were the shipments of petroleum products from Batoum during the week ended April 12th, o.s. (in poods):—

	Illuminating Oil.		Other Products.	
	1907.	1908.	1907.	1908.
To Europe	—	—	185,000	233,000
To the East	361,000	463,000	78,000	2,000
To Russian Ports.	—	2,000	1,000	2,000
From 1st Jan. to 12th April:—				
To Europe	4,963,000	3,515,000	3,010,000	2,998,000
To the East	3,559,000	4,652,000	95,000	2,000
To Russian Ports	1,005,000	1,031,000	36,000	21,000

CLASSIFIED IMPORTS INTO UNITED KINGDOM UP TO MAY 4th, 1908.

IN GALLONS.

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COUNTRY.	ILLUMINATING.		LUBRICATING.		RESIDUALS.		GAS OIL. (Solar)		BENZINE.		FUEL OIL.		OTHER DESCRIPTIONS.		TOTALS.	
	Since Apl. 20.	From Jan. 1.	Since Apl. 20.	From Jan. 1.	Since Apl. 20.	From Jan. 1.	Since Apl. 20.	From Jan. 1.	Since Apl. 20.	From Jan. 1.	Since Apl. 20.	From Jan. 1.	Since Apl. 20.	From Jan. 1.	Since Apl. 20.	From Jan. 1.
Austria ...	—	—	—	16,000	2,740	23,920	—	—	—	—	—	—	—	—	2,740	39,920
Belgium ...	—	—	38,623	255,313	—	36,000	—	—	—	40	—	—	—	1,140	38,623	292,793
Canada ...	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Dutch India ...	—	—	—	—	—	—	—	—	—	5,293 470	—	—	—	—	—	5,293,470
Germany ...	1,452,340	1,853,070	57,660	596,520	—	6,090	—	—	—	270	—	—	—	—	1,510,000	2,402,020
Holland ...	—	—	—	9,220	—	—	—	—	—	77,340	—	—	—	19,260	—	105,820
Roumania ...	—	3,114,700	—	—	—	—	1,350,000	4,433,150	—	2,033,900	—	—	—	—	1,350,000	9,581,750
Russia ...	—	6,085,620	3,000	1,420,620	—	68,000	—	—	—	—	—	—	—	—	3,000	7,574,159
U.S.A. ...	381,360	41,162,740	1,230,100	15,100,780	—	609,480	856,410	16,077,960	629,000	978,840	—	1,358,300	25,890	710,180	3,122,760	75,998,280
Other Countries	200	340	6,750	42,185	—	40	—	—	—	280	—	560	—	160	6,950	43,565
	1,833,900	52,216,470	1,336,133	17,440,638	2,740	743,530	2,206,410	20,511,110	629,000	8,384,140	—	1,358,860	25,890	737,110	6,034,073	101,391,777

THE PETROLEUM EXPORT TRADE OF AMERICA DURING 1907.

(Compiled by Messrs. LANE and MACANDREW, 26, Great St. Helens, London).

	REFINED.						NAPATHA.			
	BULK. Equivalent in Barrels.		BARRELS.		CASES.		BULK. Equivalent in Barrels.		BARRELS.	
	1907.	1906.	1907.	1906.	1907.	1906.	1907.	1906.	1907.	1906.
BRITISH ISLES	2,722,205	2,477,804	1,211	15,352	..	7,151	185,339	199,933	..	5 Cases 8,691
FRANCE	661,858	729,053	10,272	20,910	616	..	208,005	88,922	13,436 Cases 6	5,169 Cases 2,000
GERMANY	2,852,220	2,788,297	350	1,165	2,611	..	..	32,066	500 Cases 330	Cases 500
HOLLAND	2,805,102	2,686,002	3	761	2,527	..	..	..	..	..
BELGIUM	881,748	998,473	284	1,700	..	..	45,671	35,184	198	..
NORWAY	257,880	202,661	9,603	..	..	..	..	..	400	150
SWEDEN	371,200	413,331	33,339	22,201	..	..	..	..	12,539 Cases 1,500	6,440 Cases 4,000
DENMARK	379,054	425,143	..	..	..	..	..	..	..	..
ICELAND .. .. .	..	..	4,196	..	..	..	..	..	..	..
SPAIN AND PORTUGAL..	133,098	96,193	600	359	76,700	39,465	..	..	100 Cases 47,800	Cases 9,550
MALTA	6,552	..	..	..	..	2,200	..	..	..	Cases 1,000
ITALY	437,007	460,929	..	124	4,500	..	..	..	465 Cases 24,107	Cases 34,208
AUSTRIA-HUNGARY ..	..	..	20	554	..	..	..	..	..	Cases 3,000
GREECE .. .. .	..	..	..	..	2,500	157,741	..	..	..	..
TURKEY IN ASIA ..	..	..	..	..	..	63,617	..	..	..	..
AFRICA, including neighbouring Islands, but excluding North Africa, Egypt, and Zanzibar .. .. .	..	..	1,241	594	1,219,333	1,597,563	..	..	875 Cases 20,730	3,749 Cases 6,875
AFRICA (NORTH) ..	29,238	29,043	..	400	..	8,720	..	..	949 Cases 11,816	Cases 6,500
EGYPT	9,501	..	..	..	..	508,000	..	..	Cases 18,425	Cases 2,000
JAVA, PADANG, MA- CASSAR, MOLUCCAS, BANDJERMASIN, and PALEMBANG .. ..	..	..	..	..	1,230,302	1,550,845	..	..	..	..
STRAITS, RANGOON, PHILIPPINES, SAIGON, BANGKOK, MAURITIUS, and VLADIVOSTOCK ..	..	..	..	..	2,314,539	1,405,269	..	..	..	..
INDIA, including Aden, Persian Gulf, and Colombo	257,739	475,829	..	..	1,732,321	1,291,291	..	..	..	..
CHINA	695,764	601,950	..	..	6,566,798	3,329,122	..	..	..	..
JAPAN	74,000	..	..	..	4,234,821	4,212,990	..	..	..	..
CANADA	10,103	46,411	21,438	18,247	27,892	30,372	..	..	160 Cases 597	1,444 ..
WEST INDIES and CEN- TRAL AMERICA ..	45,031	..	12,801	11,574	1,038,651	990,382	..	..	1,603 Cases 20,492	373 Cases 9,908
SOUTH AMERICA ..	..	..	5,658	4,965	5,438,665	4,860,356	..	..	518 Cases 179,126	60 Cases 170,548
AUSTRALIA and NEW ZEALAND .. .. .	..	..	205	444	2,005,917	2,527,137	..	..	Cases 190,053	Cases 163,888
PACIFIC ISLANDS ..	..	..	10,300	41,342	124,816	87,074	..	..	22 Cases 4,593	Cases 15,184
EASTERN PORTS ..	..	..	635	..	..	..	..	..	6,857 Cases 65,695	..
TOTALS	12,629,300	12,431,119	112,156	140,692	26,023,509	22,669,295	439,015	356,105	38,622 Cases 585,270	17,390 Cases 437,852

CRUDE exports for 1907 amounted to 2,166,045 barrels (in bulk), 162,748 barrels, and 390,311 cases; GASOLINE, nil.
GAS OIL, 1,337,157 barrels (in bulk); and RESIDUUM AND FUEL OIL, 330,853.

The Graciosa Oil Company.—The correspondent of the *Oil, Paint and Drug Reporter*, writing with reference to the Santa Maria field, states that the Graciosa Oil Co. is not at present operating its own pipe line from the wells to Port Harford, and prospects of starting its refinery at the latter point seems very remote. The company's product at present is being handled by the Associated Oil Co.

A Successful Year.—The twelfth annual meeting of the Schodnica Petroleum Co. was held recently, at the premises of the Anglo-Austrian Bank, in Vienna. The balance sheet submitted shewed, after writing off for various purposes 1,613,565 kronen, a net profit of 288,861 kronen. Out of this a dividend of 25 kronen per share has been declared.

RUSSIAN BENZINE ON FOREIGN MARKETS.

The *Trade and Industry Gazette*, in a recent issue, publishes an article dealing with the question of the benzine trade on the world's markets, and the part which Russian benzine can take in it.

The development of the automobile business and the increase in the use of benzine motors for industrial purposes has found the Russian petroleum industry quite unprepared. In Russia there is on the market only a very trifling quantity of benzine suitable for motors, and the price of the same is so high that it can only with difficulty find application in larger machinery such as, for instance, motor launches, where the preference is now given to kerosene engines. The bulk of the other benzines on the Russian market are of such low quality that even at half the price of the refined benzine they find only a limited sale.

Apart from supplying the Russian home market, Russian benzine and other light oils such as ligroin and gasolene are also exported to foreign markets. The great increase in the demand for this product has brought about high prices on foreign markets with the probability of a continued advance. In Germany this supposition is further strengthened by the efforts made by certain firms to monopolise the trade in motor spirit. The question is now the topic of discussion in the special press, and our contemporary considers it in the interests of the Russian export trade to set out in approximate the present condition of the benzine trade of the world.

The output of benzine in America may be estimated at 800,000 tons; in Dutch India, 260,000 tons; Roumania, 110,000 tons. The export of benzine from Russia *via* Novorossisk (chiefly Grosny benzine and ligroin), which in 1906 amounted to 1,163,000 poods or 19,000 tons, in 1907 increased to 2,242,000 poods or over 36,000 tons. The output of Austria-Hungary is difficult to estimate, as it will depend on the continuance or otherwise of the crisis now reigning in the petroleum trade, but in any case after satisfying the home consumption there can hardly be left more than 10,000 tons of benzine for export.

It must be mentioned that the great development of motoring in the United States has opened a huge market for benzine in that country. The export of benzine from the United States has declined in 1907 by 40 per cent. against 1906, and now already considerable quantities of benzine are imported into the United States from Dutch India. The consumption of benzine in the United States, allowing for an increase this year of 10 per cent., or 770,000 tons, or in other words, the United States consumes practically all the benzine which they produce. If this is so, and if the new Kansas fields will not allow of any increased output of benzine, then all which the other countries have left for their use is about 418,000 tons.

The consumption of benzine by the leading countries may be taken approximately for: - France, 130,000 tons; Germany, 115,000 tons; England, 100,000 tons; Holland and Belgium, 10,000 tons; Denmark, Sweden and

Norway, 100,000 tons; and, lastly, Italy, Spain, and the Balkan States, 20,000 tons—making a total of 380,000 tons. The remaining 38,000 tons go to satisfy the needs of Japan, China and India.

The above approximate figures shew that the conditions of the supply and demand in the benzine trade do not make a decline in prices probable. The rapid growth of the use of benzine is shewn by the fact that Germany has during the last five years increased its consumption of this product from 30,000 to 100,000 tons per annum. The author then proceeds to deal with the question of the chances of a Russian benzine export trade, which of course would depend largely on the possibility of marketing the heavier grades. The high prices of light benzine have led to the utilisation for motor purposes of the heavy benzines. Only two or three years ago, all benzines with a specific gravity higher than 0.680 were considered unfit for motor purposes. Now, the largest quantity sold is of 0.720, and in England it is even 0.740—0.760, as it has been proved that the suitability of a benzine for motor purposes depends not on the gravity but on the absence of fractions boiling above 150° C. Russian benzines, gasolenes and ligroins belong to heavy class of benzines, and in addition are badly distilled and badly refined. The fuel is marketed only at low prices, and the opinions expressed about them in the special press is of a negative nature. Taking into account the contents of products distilling over up to 150° C. in Baku crude oil at 4.5 per cent., and for Grosny crude oil at 10-18 per cent., the Russian petroleum industry ought to produce 25,000,000 to 30,000,000 poods (or 400,000 to 480,000 tons) of these valuable products. The actual output, however, is much below this, the bulk being burnt as fuel, and only a low price article exported.

The hope is expressed that ere long, when the crude oil production will again increase, and it will become necessary for the Russian petroleum industry to regain its old markets, the industry will adopt the only rational policy, and that is to export only finished and refined products and not semi-refined articles, which yield little profit. The large refineries at Baku are already working in this direction, but the treatment of Grosny crude oil, which contains a larger proportion of heavy benzine remains in the same unsatisfactory condition. In the matter of supplying the world with benzine a great deal of creative work is now in progress; new types of motors are being elaborated, which by means of special carburettors are capable of using heavy benzines and particularly of benzol, which is becoming a dangerous rival to benzine, and lastly new tank steamers are now being constructed which will help to cheapen bulk oil freights, which have lately gone up to 35s. a ton from Batoum to Hamburg against the usual 14s. The influence which Russian benzine and ligroin have on all this work is merely that of substitutes, having no great in itself and without previous treatment, can only be used as an admixture.

THE OIL TRADE IN SPAIN.

INTERESTING DETAILS FROM A CONSULAR REPORT.

The British Consul in Madrid, in writing with regard to trade in Spain during 1907, pays attention to the petroleum trade, making a number of interesting remarks upon the subject. One of the largest refiners in Spain, he says, quotes the following prices for petrol :—Alicante, Santander, Barcelona, and Seville, 65 pesetas per hectolitre free on rail. The petrol is sold in cases of 10 and 5 litre cans, for which an extra charge is made of 15 pesetas, which is credited to the purchaser of the case if returned in good condition and free of charge at the factory station. On orders of 500 litres and over a discount of 5 pesetas per hectolitre is made. Prices are quoted by another house as follows : Alicante and Bilbao, 55 pesetas per hectolitre, and for small orders 60 pesetas free on rail. The Madrid price therefore works out as follows :—Factory price, 55 pesetas per hectolitre ; railway transport and return carriage for cases, 8 pesetas per hectolitre ; municipal tax (66 kilos. at 25 c.), 17 pesetas per hectolitre—total cost in Madrid per hectolitre, 80 pesetas. The refining of petroleum is controlled by a firm who have two or three refineries in Spain, including those at Badalona, near Barcelona, and at Alicante. There are also refineries at Barcelona, Santander, Corunna, and Alicante. The places of importation of petroleum leaving more than 20 per cent. residue on distillation at 300° C. will shew the relative importance of the principal refining centres (quantities given in metric tons) :—Alicante, 5,142 ; Barcelona, 4,478 ; Corunna, 1,534 ; Pasajes, 1,751 ; Gijon, 1,178 ; Santander, 4,310 ; Seville, 4,515 ; Tarragona, 2,077 ; Valencia, 1,371 ; Bilbao, 3,359. The different refiners have an agreement as to prices. The use of burning petroleum must have largely diminished with the increase of electricity and the manufacture of carbide of calcium for acetylene gas, and the high price of motor spirit may have as object to compensate the loss from the reduction in the price of burning oils necessitated by the competition from other modes of lighting. There are petroleum deposits at Soria, the product of which has been used locally in a rough way by the inhabitants.

Russian and American lubricating oils are sold nearly as cheaply in Spain as in the United Kingdom. One large Russian firm keeps a depôt in Barcelona, and imports in tank steamers, selling duty paid to its clients. Before the Convention with the United States, and under the old tariff, lubricating oils from the United States paid 10 pesetas more per 100 kilos. than those entering under the minimum tariff. Resort was therefore often had to the expedient of denationalising American oil by shipping it to Continental ports, changing the marks of the consignments and re-shipping to Spain. This subterfuge will explain the large importations of oil purporting to be of Belgian origin, which in future will be transferred to the credit of the importations from the United States, now that the United States enjoy the minimum tariff. Russian lubricating oils will suffer from this change, the United States being now able to export direct to Spain certain qualities that could not stand the extra freights, etc., from Antwerp and Hamburg.

THE BITUMEN AND ASPHALT DEPOSITS IN PALESTINE.

H.M. Consul-General at Beirut, in the course of a recent report, refers to the deposits of bitumen and asphalt in Syria and Palestine, that there is a bitumen mine at Hasbeya, a village in the Vilayet of Damascus. It belongs to the "Civil List" of H.I.M. the Sultan, and has been worked for many years by the firm of Habib Sabbag and Sons of Beirut, to whom a contract for a long period has lately been given, and it is expected that the mine will now be better and more scientifically worked, and much better results obtained. In past years the mine only yielded between 400 and 500 tons yearly, of which the greater part was exported to Germany, where it was sold at £15 per ton. The quality of this bitumen is excellent, and it is known in Europe under the name of "Bitumen de Judée." Traces of bitumen are also found along the shores of the Dead Sea, but this is left to the Bedouins of the surrounding districts to pick up. There are large deposits of asphalt near Lattakia, *i.e.*, in the six villages of Kferie, Cassab, Ghoman, Chmeisse, Khorbe, and Soulas. These villages are all near to one another, the furthest away from the others being Kferie, a two hours' journey away. The Kferie mine is large and reported to be a rich one. The original concession for working the mines was ceded by Mr. Gilchrist, of Constantinople, to Mr. Zervodachi, of Alexandria. Mr. Zervodachi commenced operations but has had to suspend them owing to the cost of transport from Kferie to the coast, and he is now intending to obtain, if possible, a concession to build a light railway from Kferie to the port of Lattakia, but up to the present time the concession for the projected light railway has not been granted.

PRODUCTION OF ENGLISH COMPANIES IN RUSSIA.

BAKU RUSSIAN PETROLEUM CO., LTD.—The production for the week ended April 25th was 198,000 poods, or 3,105 tons ; and for the week ended May 2nd was 186,000 poods, or 2,999 tons.

RUSSIAN PETROLEUM AND LIQUID FUEL CO., LTD.—The production for the week ended April 25th was 211,000 poods, or 3,402 tons ; and for the week ended May 2nd was 215,000 poods, or 3,466 tons.

SPIES PETROLEUM CO., LTD.—The output for the week ended April 26th was 284,675 poods, or 4,591 tons, of which the fountain in No. 5 well, on plot Baskakoff, gave 156,250 poods, or 2,520 tons. This fountain still continues to spout, the production for the 27th April being 21,850 poods, or 352 tons. The production for the week ended May 3rd was 278,560 poods, or 4,492 tons (decrease due to partial stoppage during Russian Easter), of which the fountain in No. 5 well, on plot Baskakoff, gave 149,700 poods, or 2,414 tons. This fountain still continues to spout, the production for May 4th being 20,850 poods or 336 tons. The total production from this fountain to the 4th May was 2,234,325 poods, or 36,037 tons.

THE EUROPEAN PETROLEUM CO., LTD.—The production for the week ended April 26th was 120,608 poods, or 1,944 tons ; and for the week ended May 3rd was 121,872 poods, or 1,965 tons.

The Schibaieff Petroleum Company, Limited.

REASONS FOR THE DISAPPOINTING RESULTS.

The ordinary general meeting of the shareholders of the Schibaieff Petroleum Co., Ltd., was held on Wednesday of last week, at Winchester House, Old Broad Street, E.C., Mr. C. J. CATER SCOTT (chairman of the company) presiding.

The SECRETARY (Mr. W. A. Turner) having read the notice convening the meeting and the report of the auditors,

The CHAIRMAN rose to move the adoption of the report, a *resumé* of which appeared in the last issue of the REVIEW. He said: My first duty is to apologise to you for the delay in issuing the report and accounts for the period under review, and I am reminded that when I spoke to you a little over a year ago I had to make a similar apology. The cause for the even extended delay this year is exactly the same as a year ago. We have an arrangement with Messrs. Nobel Brothers and the Mazout Co. in Russia for doing our distributing work in the interior of the country. By the terms of that agreement we ought to have received from those firms their final accounts on the 31st July, but as a matter of fact we did not receive them until the 23rd December. I am not blaming those firms for the delay; I believe it is almost inevitable, under the conditions under which they work, that there should have been some delay, but I want to point out to you the delay is not due to any neglect on our part. Then, after we had received those accounts, which were very voluminous, we had to subject them to much careful criticism, so much so that to-day there are certain minor points which are not absolutely settled. The result was, we were not able to hold a meeting of our Russian company, which must necessarily precede this one, until the 21st of March, and then, although it would have been possible to have held the meeting before to-day, I think all my colleagues and myself felt that it was not quite fair to shareholders to bring them together just before Easter week, when they might want to be away, and so we preferred to let it stand over until after the Easter holidays. That is my excuse for the delay in issuing the report and accounts, which we regret. I may say that I hope this year we shall be able to make a different arrangement. That will, however, necessitate our treating as stocks the amounts which we have passed over to Messrs. Nobel and Mazout for sale, not waiting for their final accounts. If we do that I hope that it may be possible to hold the meeting and give the results of the year ended on the 31st March this year at a very much earlier date—probably well before the end of December, 1908. This delay, which we regret so much, certainly has not rendered easier my task to-day. It is not an easy one, and certainly not a pleasant one. In passing, I might say that I think few shareholders can have any idea of the anxieties and difficulties that your directors have had to face during the last two or three years in connection with the carrying on of the work at Baku. But I should like to remind you that the period covered by the accounts is the twelve months from the 1st April, 1906, to the 31st March, 1907, and that period was one of continuous disaster to all the oil trade at Baku. We had a succession of strikes, partly labour and partly political, and these finally culminated in the great strike which began on the 20th June, 1906, and went on until the 24th August. During the whole of that time everything was absolutely at a standstill, though, unfortunately, we were subjected to very considerable extra expense in trying to preserve our property. As soon as the strike was over there was an attack made on Mr. Urquhart, our late general manager, to which I referred a year ago, and that necessitated his resignation, because in his opinion—and I think he was right—his life was not safe in going back to Baku. Then we were face to face with the difficulty all last year of providing for the management of your business. We gave the matter our most careful attention, and finally decided that the best—in fact, the only possible—course at that moment was to work it by a committee consisting of Mr. Yehlin, who had charge of the refinery, and who is probably the most practical and scientific chemist in Baku; Mr. Ferguson who managed our oil fields; and Mr. Wallis, who had charge of our office and who conducts all the correspondence with Moscow and London. Now, I am not saying that such an arrangement is an ideal one. I think we sitting at this board would have preferred, if we could, to have had one man with full control and full responsibility at the head of affairs, but it was not possible. There was a great danger, if we had appointed any one man, that he would be at once a centre for all sort of attacks, partly by anarchists and partly by labour, and we considered that, by forming a committee such as we have, we were to a great extent removing the risk of loss of life. Since then

that committee has worked, and I think on the whole has worked as well as we could expect, only in the place of Mr. Ferguson, who was the manager of the oil fields, we have substituted Mr. Djevanshir, who is a gentleman with probably greater knowledge of boring operations on the Baku oil fields than anybody else, and I think we are very fortunate in having been able to secure his services. But when I have told you of these troubles I have not exhausted the list of difficulties with which we have had to contend. We have had all through this time of strikes from labour and political causes to face an absolute want of support from the authorities; in fact, you may say that out in Baku the authority of the Crown has practically ceased to exist, while so far as the police were concerned they were worse than useless; we should have been better without them altogether. The result has been that we have had to carry on our business under difficulties. I do not know that anyone can realise what those difficulties were.

The cost of everything has increased enormously, the quality of the work done has been as bad as it could be, and the result to us is that to-day we find it costs us—and I think our costs are based very much on the same figure as that of our neighbours—about 15 copecs per pood, whereas in former years we used to consider 4 copecs per pood as a proper cost. Under these circumstances, perhaps you will not be altogether surprised that we come before you to-day with an account which we must confess at once is most disappointing. Now, may I ask you to turn to the accounts which you have before you while I say a very few words upon them? First of all, I will take the profit and loss account of the Russian company, and turn to the credit side, where you see that the gross profits, after adding to them an amount deducted from reserve to correspond with the extra cost of working and the shortage during the period of the strike, amount to £34,335 18s. 9d. Adding to that the rents received, less rents paid, which are also part of our gross profits, and the profit derived from the sub-leasing of our tank waggons, we have a gross profit for the year of £44,499. This profit is made up, as I think I have told you on previous occasions, from the working of our oil fields, from the refinery and from the distribution business. The oil fields during the period have shewn a very considerable profit, although not so much as they ought to have done, because we have had to face a reduced output in consequence of the strikes and an extra cost also on account of the labour and political disputes. But, in spite of that, we have made on the oil fields a very substantial profit. Unfortunately that profit has been dipped into very largely by the refinery and the distribution business. The refinery has suffered from the same cause as the oil field—increased cost of working, and also from our not being able to work full time in consequence of the strike. We are poor; we have not got command of the capital necessary to carry on this business, and this has prevented us from time to time buying the oil which we require in addition to our own production for our distribution business in Russia. We have not been able to buy at the periods of the year when the oil is generally cheapest, simply for the reason that we could not afford to carry the heavy stocks. Therefore, we have had to buy that oil when there were other people coming into the market, and we have had to pay proportionately higher for it.

Then in connection with the distribution, there is another matter which has seriously affected us this year. By the arrangement with Messrs. Nobel and Mazout practically they have what we consider a monopoly of the sale of oil in the interior of Russia, and with the high prices current in Baku we considered that they ought to have got very high prices in Russia, a good deal more than the equivalent of those prices, so that there should have been a very substantial profit on the distribution business. Unfortunately our friends who are selling for us took a different view, and they sold forward to a very large extent at prices which were certainly not profitable—scarcely remunerative. I believe subsequently they admitted they had made a mistake, but then the mischief was done. That has resulted in a loss to us of many thousands of pounds, and I believe that, but for what we consider the mistaken action on their part, we should have been on the right side. You may say, "Well, these people suffer with you." That is quite true; they do suffer with us, but with their enormous production of crude oil they can afford to make a substantial loss on the distribution business and yet come out at the end of the year on the right side. Now, if you will turn to the other side of the account there are two items only to which I think it necessary to

draw your attention. The first is trade expenses, which stands at £16,829 11s. 8d. A year ago I told you that the proper amount for the twelve months—the previous period covered by the accounts was seventeen months—was about £18,500, so that on that we have made a saving of £1,700. Still, I consider this amount of £16,829 excessive. You must, however, remember that it covers the administration of the two head offices—the one of the English company and the one of the Russian company in Moscow. In addition to that we include for the last time the rent of the very large office which we necessarily had in Moscow when we were doing our own distribution business, and further there is included an amount of £2,000 for taxes paid to the Russian Government. Still, I hope that when we come to the accounts of the present year we shall be able to shew a satisfactory reduction on this £16,000 odd. The next and only other item to which I need draw your attention, I think, is the discounts, commissions, etc. The word “commissions” is somewhat misleading; it is not, in fact, a commission such as we usually understand, but it is the money paid to our bankers for their credits. The amount of £74,881 compares with £60,000 for the corresponding period of the previous twelve months, or an increase of £14,881, and that is entirely due to the higher rates of money which were current not only in England during the winter of 1906-7, but also all over the world. I may remind you that when you get an English Bank Rate of 4 per cent. or 5 per cent. it is a good deal for us here; but probably in a country like Russia you have to pay 8 per cent. or 9 per cent. for your money. But I want presently to come back to this question of discounts and commissions, because on that, in my view, turns the whole future of our company. The balance down, being loss for the year, is £53,835. That puts it at its worst, because we have received back from the Société Anonyme of Antwerp an amount of £10,925, which is brought into the credit of the English company, and that £10,925 represents our share in the trading of that company, which is our agent for the sale of lubricating oils outside Russia; so that really the loss for the year comes down to £42,910. Now, if you will turn to the balance sheet of the Russian company, there are no very important changes. The first change is the reduction of the reserve capital from £125,000 to £94,000; but our reserve capital and our reserve for depreciation, even with that deduction, still stands at the very considerable sum of £451,326. On the other side of the account sundry debtors, £212,000 shew a reduction of £197,000, which is due to the altered circumstances of our trade. We no longer sell to many of these people direct.

When we are looking at what is, I admit, an unsatisfactory account, I think it is some little satisfaction to us to know that if you take the first five items on the credit side of the balance sheet you have practically free assets amounting to £480,000. That is, of course, quite irrespective of our valuable property, the refinery and plant at the oil fields. Going a little further down the accounts, I come to the oil fields, which now stand at £831,000, as against £754,000 a year ago, or an increase of £77,000. Unfortunately for want of profit we have not been able to write down our oil fields as we should like to have done, and I must frankly confess that this increase of £77,000, owing to the heavy costs of labour and the great difficulties which we have had to face in sinking our wells, does not really, I am afraid, represent increased value to our assets. When you turn to the London accounts, there is really very little to say on them; they speak for themselves. You see there we take credit for the amount of £10,900 received from the Société Anonyme of Antwerp. Now, may I ask you to go back for one minute to the question of commissions and discounts? This, I think, is really the serious thing for us to face. With cheaper money, it is true, we shall probably get this amount down, but as long as we work under present conditions it must remain a very serious burden to us. Taking our business as a whole, I see no reason why our oil fields, if we have steady working and no labour disturbances—and I may say here that, although things are apparently quiet in Baku, labour is still most unsatisfactory, there are constant demands being made, which would be ludicrous if the position were not so serious, but still the men are working, and they are working badly—if we could only get steady working and anything like normal conditions, we should probably be able to increase our production, and I should look to the oil fields yielding us a very good profit indeed. Similarly with the refinery, under normal conditions; although we should never expect to make a very large profit out of it, at any rate, there ought to be no loss, and with the distribution business we might look, I think, for some profit—certainly no loss. Therefore, if you take those three items together, we ought to be able to shew some very considerable profit. Unhappily, this distribution business means great demands for cash for carrying it on, owing entirely to the climatic conditions of Russia. Practically the country is snowed up and

ice-bound for six months out of the twelve, and, consequently, we have to carry enormous stocks. Let me explain to you just for a moment what it means. When navigation closes, about the end of October, we have to work into stock at Baku. That stock we have to carry there until navigation opens, late in March, then we ship that stock away to the interior of Russia, but all through the summer we are working and shipping, so that, practically, by the end of summer we have in Russia a twelve months' stock of oil of one sort or another for distribution, and it means that we are from twelve to eighteen months—I do not think I should exaggerate if I left out the twelve and said eighteen months—before we get back that money. This, of course, means that we always require very large cash advances, which cripples us in every way. It requires us to do a great deal of financing, which, in a trading company, I have a perfect horror of, and it also requires us to get from our banking friends credits for carrying on our business, for which we have to pay. Now, in the difficult times through which we have been passing in Russia, I think we have to thank our banking friends for the great consideration they have shewn us. Some of them would have liked very much to withdraw those credits, but we have explained to them the conditions, and they have stuck to us and acted most loyally towards us, but I do not think it is a position that can continue indefinitely. Working as we are working to-day it is certainly very expensive; it is very burdensome, and in times of need it might be extremely dangerous.

I think, therefore, that what we ought to set before ourselves is this: we should very seriously consider whether we cannot put our business on a sounder footing even at some little sacrifice to ourselves, and then I think we might look forward to the future fairly hopefully. We have a very fine property. If you take our oil fields, it is a very valuable property. Taking our refinery, I suppose there is no more up-to-date refinery in Baku, and then you have the reputation of our company and its brands, which stand second to none, if any approach them, in Russia; so that I think if we could only formulate some scheme by which we could put our finances on a sounder footing we might be able to look forward somewhat hopefully to the future. I do not say that we could look forward with quite such rosy views as we have done in the past, but I think we should be able to save something for the shareholders and make the property, which is to-day valuable, really remunerative to them. Now I have dealt with the accounts. I have tried to give you as far as I can a simple statement. I have nothing to keep back, and if there are any points which I have not touched upon and upon which you wish to have further information, I shall be only too pleased to give it to you to the best of my power. It only remains for me now to move that the report and accounts be adopted.

Mr. G. GRINNELL-MILNE seconded the motion.

Mr. KINGZETT asked if the chairman could give the shareholders some indication of the financial policy which he had hinted at.

The CHAIRMAN said he was not prepared to submit a scheme that day, but it was the wish of the directors that they should at the earliest moment formulate some scheme and take the shareholders into their confidence. Of course, in formulating a scheme they had to consider the position of their creditors.

Mr. CHILTON remarked that the ordinary shareholders had received no dividend since the year 1901. It seemed to him that the directors left the business entirely in the hands of the Russian administration, and that Mr. Cater Scott had so many appointments in the City that he could not really give the company the proper time and attention which it deserved.

Mr. KINGZETT said he was struck with two features of the accounts. The first was the reservation in the Russian accounts as to the provision for bad and doubtful debts. It suggested that the provision which had been made was not adequate, and if that were the case the position was still worse than the accounts seemed to indicate. Then, as a business man, he was struck with the chairman's statement that although the oil fields had done so well and had produced so much good oil, they had allowed it to be sold at prices which had not been remunerative.

Mr. KING remarked that the position of the company was getting worse and worse, and in his opinion it would be far better to wind it up.

The CHAIRMAN, in reply, said that he had already endeavoured to explain how the profit on the oil fields had disappeared this year. It was partly through the extra cost of refining and partly through what they considered was a mistake on the part of their selling agents. It had been suggested that they should terminate the arrangement with the selling agents. That company was the junior partner. They had 25,000,000 of poods of kerosene to sell against 5,000,000 belonging to this company, so that they could not control the policy of the selling agents. The agreement was entered into because it would have meant absolute ruin to have

attempted to go on doing their own distributing business in Russia, which cost an enormous amount of money. If he could come before the shareholders with a scheme for winding up the company, paying the creditors and giving something back to the shareholders, there might be something in the suggestion to wind up, but they had a property in Russia which was extremely difficult to deal with. The directors had no desire to go on with the company, the management of which involved ceaseless anxiety. Personally, he would have given up his seat on the board long ago, but when the company had got into a tight corner one did not feel justified in leaving.

Mr. VON OFENHEIM referred to the great services which Mr. Cater Scott had rendered to the company, and pointed out that many other companies were in a similar position to the Schibaieff Petroleum. He thought they ought to rearrange the business and place it on a sound financial footing.

The motion was carried with one dissentient.

Mr. C. J. CATER SCOTT and Mr. G. GRINNELL-MILNE, the retiring directors, were re-elected, and Messrs. DELOITTE PLENDER GRIFFITHS AND Co. were reappointed auditors.

The meeting then closed.

THE PROGRESS OF LIQUID FUEL FOR MARINE PURPOSES.

The trial trip of the screw tug "Eduardo," built to the order of the Anglo-Chilian Nitrate and Railway Co., Ltd., for the port of Tocopilla, was run a few days ago. The vessel is of the following dimensions:—Length 55 feet, beam 11 feet 6 inches, depth (moulded) 6 feet 6 inches, draught 4 feet 6 inches, and is fitted with compound engines 8½ inches by 18 inches by 12-inch stroke, supplied with steam by a dry back boiler working at a pressure of 140 lbs., and indicating 80 i.h.p. She is fitted out for burning both coal and oil fuel, or the two combined, arranged on the Kermode system, being supplied with one of Messrs. Kermode's patent burners, and has sufficient oil storage to run for about two and a-half days. The vessel is specially equipped with salvage apparatus, including a pulsometer pump capable of pumping 10,000 gallons per hour. The trial was run down the river as far as Crosby Lightship, and four runs were made on the measured mile, when a speed of nearly eight and a-half miles per hour was easily obtained. The vessel has been built by Messrs. A. Rutherford and Co., Birkenhead, and designed and supervised by Messrs. Henry H. West and Son, Liverpool.

PETROLEUM BORINGS IN THE CRIMEA.

At the present moment boring operations in the Kertch district are carried on by two firms—the Kertch Boring Co. (A. N. Voieikoff) and Mr. Anton Raky. The Voieikoff Co. has commenced drilling a well on the Tarkhan estate, leased from the Princes Trubetzkoi, and situated at a distance to the north-west of the town of Kertch on the Azoff coast. The company has at its disposal considerable financial means, being supported by the German banking firm of Bleichroeder, and possesses also excellent technical facilities. Unless oil is found before, it is intended to drill to 600 metres. According to the report of the Government Mining Engineer for the Mariupol district, at the end of December this company's well had reached a depth of 170 metres, the last 100 metres having been accomplished in six days.

Mr. Anton Raky is carrying on trial borings in four localities along the coast of the Black Sea: at Djordjava, 7 versts from Kertch; at Tchongelek, 25 versts from Kertch, and at Tcherelek, 35 versts from Kertch near the iron-ore mine of the Russian Providence Co. One well each has been started at Djordjava and Tcherelek. At Tchongelek, where borings have been carried on previously by various firms, two of the old boreholes have been made use of, in one of which (No. 2) boring is continued, whilst the other (No. 1), which is now 200 metres deep, is now being cleared out and prepared for drilling. According to the report of the Government Engineer for the district, the depth of the Raky wells at the end of January was: at Djordjava, 134 metres; at Tchongelek (No. 2), 65 metres; at Tcherelek, 125 metres. In the last-mentioned well, gas and traces of oil were observed at 117 metres. The formation in all the boreholes is clay of light grey and dark blue colour.

A Well-Known Oil Man in London.—Mr. F. L. Crawford, a well-known Canadian driller, has this week returned to London from Persia, where he has been engaged for the past two and a-half years in drilling for oil. Though up to the present time oil has not been struck in anything like commercial quantities, Mr. Crawford is convinced that some day we shall see Persia upon the list of petroleum producing countries.

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Resinous Products in Mineral Oils.

PAPER by Dr. R. EICKMANN.

(Concluded from page 246.)

It was not possible to obtain any sharply characterised individual substances. One can only say tentatively from their conduct that they consist of condensations or polymerisations of unsaturated hydrocarbons such as terpenes, with additions of oxygen. The process of formation is similar to that suggested by G. Kramer and A. Spilker for lubricating oils themselves. That is, they found as the elementary analysis of a heavy Russian lubricating oil (after purification by concentrated sulphuric acid), carbon 87 per cent., hydrogen 13 per cent. They suppose the oils to belong to the unsaturated series, $C_n H_{2n-4}$ or $C_n H_{2n-6}$, and believe that the saturated nature of these hydrocarbons is explained by the combination of two or more unsaturated molecules such as dyhydro-terpene ($C_{10} H_{18}$)₂.

(b) Separation of the resins by means of animal charcoal.

A more convenient and efficient way of separating resins from dark and light oils in abundant quantities resulted from the following consideration. When one slowly filters the ordinary yellow or brownish red lubricating oils through finely-powdered animal charcoal, they first come through almost colourless, or at most, with slightly bluish lustre. Only the later filtrates gradually become coloured and the last are darkest. We gathered from that that the charcoal absorbed the resinous matters and that these could be obtained again by extracting with proper solvents. We used in these experiments light-coloured oils entirely soluble in benzine. In the extraction of the charcoal saturated with oil we found that benzine would no longer dissolve out all the dark resinous matter left in the charcoal, and therefore the oil extracted by benzine was a little lighter in colour than the original. A greater part of the resin left in the charcoal as insoluble by the benzine dissolved in ether, and the part still left insoluble gave up part to extraction by benzol, and finally the last was extractable by chloroform. It required the presence of the oil to make the resin soluble in benzine, but when the resin was separated by the charcoal from the oil, it was no longer soluble in benzine.

Clifford Richardson has shewn in a communication which reached the authors of this paper after these facts were written out, that fuller's earth, when mixed with an asphalt ordinarily soluble in benzol or chloroform, absorbs the heavier portions of the asphalt to the extent of 8 per cent. in such a way that benzole or chloroform will no longer extract them, and he has drawn important conclusions from this for quantitative determination of asphalts. Very similar is the conduct of resinous substances in oils to animal charcoal.

The extraction is now conducted by us as follows:—The original oil is intimately mixed with animal charcoal (30 to 60 grammes of animal charcoal to 100 grammes of oil), and, for the purpose of easy penetration of the solvent, with moderately fine-grained silica sand, and then extracted in a Soxhlet apparatus consecutively with light benzine, heavy benzine, ether, etc. With this arrangement an oil is obtained not so light in colour as the first filtrates in filtering oils through animal charcoal.

The sum of all the extracts from the charcoal in the

Presented to the
Third International Petroleum
Congress at Bucarest.

majority of cases did not amount to 100 per cent. Often considerable percentages were lacking, and it is yet to be determined whether like Richardson's experience, still more insoluble resins remain behind in the animal charcoal.

We have now studied the properties of the extracts which we have obtained by extracting with the greatest thoroughness by first benzine boiling at 50° C., then benzine sp. grav. 0.70, then ether, benzol and chloroform. As to their physical properties, iodine number and elementary analysis, see following tables 2 and 3.

It will be noticed how, with the different solvents in the order given, the specific gravity gradually increases to above 1, with an increase in the sticky character of the extract until it is practically solid, decrease in the percentage of carbon, very sharp decrease in the hydrogen, gradual increase in the iodine number, and increase in the colour of the extract in proportion as the solubility becomes less in the solvents first used. In the benzol and chloroform extracts, which for the most part have specific gravity above 1, a high iodine number and a very sticky character, we probably have present the resins extracted with 70 per cent. alcohol, such as we have seen in oil No. 5. Investigations of these are in progress.

If now we keep before us the properties of all these resins, and the asphalt-resins mentioned in the beginning of this article, and consider them in the order in which they are separated by various neutral solutions and precipitating materials, we will come to the following conclusions. We are in a position to separate almost all of the resins occurring in crude petroleum almost quantitatively by means of neutral solvents and precipitants, or by neutral absorbents, such as finely-divided animal charcoal. It is also possible to trace the process by which the resins and the asphalts in oils (similarly also natural asphalts) are formed, gradually (by introduction of oxygen or sulphur, or oxygen and sulphur, into the oil molecule), with a splitting off of carbon, and the marked separation of hydrogen by oxidation. It is also to be seen that there are also compounds of carbon and hydrogen which only contain sulphur as the third element in the resinous materials (not in the oily portions) which can occur in crude oils.

In connection with the fact that the resinous materials in mineral oils have a higher iodine number than the purely oily portion, we can assume that in the resinous portions there are present once strongly unsaturated nuclei, which in part, probably in long geological periods, by the action of sulphur, have been changed over into saturated sulphuretted compounds, but in part also have remained unsaturated. Also the possibility that these resins shew distinct relations to the terpenes or cholesterine derivatives should be taken into account in regard to the theory of crude oil formation, and should be noted in connection with Marcusson's observations in regard to the optical activity of many of these resins. For the resins here studied, however, the optical activity was hardly noticed, or was at least slight, certainly never higher than that possessed by the oils themselves. Characteristic resins or cholesterine reactions according to C. Liebermann and Tschugajeff were not found in the samples of resins separated in this work.

The American Oil Market.

New York, Week ended April 25th.

Reports from the Eastern fields indicate somewhat of a setback in development work, and dusters figure to an impressive extent in the results recorded within the interval. Considerable interest has centred in West Virginia operations looking to the extension of old producing territory, but the efforts in this direction have, on the whole, been of meagre encouragement. Two ventures of a wildcatting nature beyond the already defined limits of Brooke county, one in advance of the Wellsburg development and the other with the view of extending the producing area of the Holloway's Cove pool, have ended in failures. In the Follansbee pool of the same county another century well was brought in, and the earlier completions are maintaining their creditable record. Shooting is occasionally indulged in to stimulate the output, and late gauges of the eight best producers in the pool shewed an aggregate of 1,325 barrels per day. Considerable test work has been in progress in Ritchie county, says the *Oil, Paint and Drug Reporter*, but results so far have not been especially promising. Deep sand operations in Monongalia county have brought more encouraging returns, the best being the completion of a well in Battelle district which yielded 210 barrels the first 48 hours. Two other producers of approximately 50 barrels a day each were encountered in the Gordon formation of the same district. In the high grade districts of South-eastern Ohio operators have been rewarded with some gratifying results, a recent completion in the Clinton lime development of Fairfield county responding to agitation by producing 70 barrels the first 16 hours. In the Caldwell district of Noble county a well was drilled shewing for 100 barrels a day, and the Lewisville district of Washington county furnished what was said to be the best well in many months in one that was considered favourable for 25 barrels a day. The prospects for increasing activity in Illinois are encouraging since the attempts to care for the congested production are promising of early success. Our correspondent writes that the leading company in the field will have completed its facilities probably by the opening of June so that the accumulated stocks of crude will be cleared and new impetus given to development work. Slow progress is reported in Kentucky, but what may be the best strike of the month was reported in a 50-barrel producer in Wayne county. Continued quiet prevails in the Mid-Continent field, and the indications are that the April record will shew a lapse from the more satisfactory results that were accomplished in March. The Glenn pool production is declining rapidly, being estimated at not more than 50,000 barrels a day. Confidence in the possibilities of the Bald Hill district is steadily abating, the formation being irregular and drilling very expensive.

REFINED AND PRODUCTS.—There was a substantial increase in the export movement in refined from the local port during the week, compensating to a large extent for the waning demand for domestic account. Our record of clearances for the interval shews a total of 14,079,040 gallons, of which 7,275,000 gallons were shipped in bulk. The aggregate for the previous week was 10,087,595 gallons (5,392,215 in bulk). Chartering for forward account has not been especially brisk, the only engagements reported being 85,000 cases for August-October shipment to Australia and 90,000 cases for May shipment to River Plate ports, New York loading, and 1,298 tons for prompt shipments to London, Philadelphia loading.

The market for the various products has undergone no further quotable change since the general revision in the export schedule. The general tone is rather steadier in consequence of an increasing demand for gas engine consumption. There was a heavy export movement in naphtha during the week, clearances aggregating 1,516,145 gallons, against 159,620 gallons recorded during the previous week. The aggregate of naphtha for the nine months ending last March were well in

excess of that for the same interval ending March, 1907, 17,340,952, against 12,353,063 gallons.

CLOSING QUOTATIONS.

	CRUDE.	Week ended	
		April 18.	April 25.
	In cents per gallon.	1908.	1908.
Pennsylvania crude in bbls.	—	—
Pennsylvania crude in bulk	—	—
Residuum, bbls. for export	—	—

CRUDE AT THE WELLS.

The quotations for oil represented by credit balances were;—

		Week ended	
		April 18.	April 25.
		1907.	1908.
Pennsylvania	.. ..	\$1.78	\$1.78
Tiona	.. ..	1.78	1.78
North Lima	.. ..	0.94	1.04
South Lima	.. ..	0.89	0.99
Indiana	.. ..	0.89	0.99
Illinois, heavy, below 30 deg.	.. ..	—	0.60
Kansas and Indian Ter., 32 deg. and above	.. ..	0.41	0.41
Heavy	.. ..	—	0.28
Humble, Tex.	.. ..	—	0.68
Saratoga	.. ..	—	0.65
Sour Lake, Tex.	.. ..	—	0.68
Jennings, La.	.. ..	—	0.67
CANADIAN OIL:—			
Petrolia	.. ..	1.34	1.44
Oil Springs, less pipeage	.. ..	1.41	1.51

REFINED—FOR EXPORT.

		Week ended	
		April 18.	April 25.
		1907.	1908.
		S.W.	W.W.
Barrels, cargo	.. per gal.	8.75	@10.75
Philadelphia	.. ..	8.70	@10.70
Bulk, New York	.. ..	5.00	@7.00
Bulk, Philadelphia	.. ..	4.95	@6.95
Cases, New York	.. ..	10.90	@13.90
Cases Philadelphia	.. ..	10.85	@13.85

REFINED IN CASES—110 FIRE TEST.

		Week ended	
		April 18.	April 25.
		1908.	1908.
3,000 to 10,000	.. ..	11.05	11.05
1,000 to 3,000	.. ..	11.10	11.10

REFINED—JOBGING LOTS.

		Week ended	
		April 18.	April 25.
120 fire test, S.W.	.. in barrels	12	12
130 fire test, S.W.	.. ..	12½	12½
150 fire test, W.W.	.. ..	13½	13½
In bulk from tanks	.. ..	10	10
300 fire test	.. ..	13½@14	13½@14

NAPHTHA AND GASOLENE.

		Week ended	
		April 18.	April 25.
Naphtha, Auto, 66 @ 72 deg.	.. ..	14.00	14.00
Gasolene, 86 deg.	.. ..	23.00	23.00

PENNSYLVANIAN OIL RUNS from April 8th to April 20th were:—April 8th, 191,118¹; April 9th, 104,095; April 10th and 11th, 246,931¹; April 12th, 380,043¹; April 13th, 89,363; April 14th, 213,981¹; April 15th and 16th, 471,432¹; April 17th and 18th, 177,932; April 19th, 217,076¹; and April 20th, 86,997.

¹ Includes Illinois Oil.

THE DELIVERIES OF PENNSYLVANIAN OIL from April 9th to April 21st were:—April 9th, 155,086¹; April 10th, 170,229; April 11th and 12th, 298,989¹; April 13th, 183,010¹; April 14th, 183,927; April 15th, 193,173¹; April 16th and 17th, 367,401¹; April 18th and 19th, 350,927; April 20th, 243,283¹; and April 21st, 198,759.

¹ Includes Illinois Oil.

CLEARANCES FOR THE WEEK.

During the week ended April 24th and since Jan. 1, the clearances of petroleum, in gallons, from the port of New York, were as follows:—

		Week.	Year.	1907.
Refined	.. ..	14,079,040	176,872,795	166,244,470
Crude	.. ..	6,000	7,845,810	1,039,870
Naphtha	.. ..	1,516,145	3,245,755	2,095,770
Residuum	.. ..	25,000	623,900	321,700

EXPORT STATISTICS.

The total exports from the port of New York and from the United States have been:—

		Gallons.
From New York, week ended April 24th	.. ..	18,778,053
Total from New York, from Jan. 1st, 1908	.. ..	257,009,537
Same period last year	.. ..	222,691,938
Increase	.. ..	34,317,599
From United States, week ended April 24th	.. ..	37,807,680
Total from United States, since Jan. 1st, 1908	470,707,825
Same period last year	398,566,568
Increase	72,141,257

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The "Review" Shipping List.

MAY 8, 1908.

(The following abbreviations are used in this table:—L. Left; P. Passed; Arr. Arrived; Sp. Spoken; Tr. Trading.)

Vessel.	From	For.	Latest Date and Position.	Vessel.	From.	For.	Latest Date and Position.
ALCHYMIST	Newport & Port Talbot	Hamburg ..	Arr. May 4	ENERGIE	Philadelphia	Gothenburg	P. Dunnet Head, May 3
ALEMBIC	London	Lisbon.....	Arr. Mar. 25	ERIVAN	Hamburg ..	Tyne	Arr. May 5
ALICE ISABELLE..	Sables	New York ..	Sp. April 30, 47 N, 31 W	ETELKA	Havre	Batoum	P. Gibraltar, April 24
AMERICAN	New York ..	Puerto.....	P. Juniper, April 27	EUPLECTELA ...	Kustendje ..	Calcutta	Arr. May 1
APPALACHEE	Singapore ..	Moji	Arr. May 4	EXCELSIOR	New York ..	Rotterdam..	Arr. May 5
APSCHERON.....	Rouen	Batoum	P. Sagres, May 4	EZIO	Vigo.....	New York ..	Coasting Peru L. April 10
ARAL.....	Philadelphia	Rotterdam ..	P. Dover, May 5	GEESTEMUNDE ..	Philadelphia	Swinemunde	P. Nantucket, April 22
ARAS.....	Tyne	Blyth	Arr. April 15	GENESSE ...	Manchester	N. Orleans & Galveston	At Newport News April 29
ARGYLL	—	—	Coasting U.S. (Pacific)	GEORGIAN PRINCE	Novorossisk	Brunsbüttel..	P. Constant'ple, May 5
ASHTABULA	San Francisco	Hankow	At Shanghai, May 5	GOLDMOUTH	Balekpappan	Singapore ..	Arr. April 30
ASTRAKHAN.....	Philadelphia	Dover	P. Del. Break., April 23	GUTHEIL	Tyne	Philadelphia	Arr. April 30
ATLAS	—	—	Coasting U.S. (Pacific)	HAINAUT	Piræus.....	Antwerp	In Port, May 5
AUGUSTA	London	Baltimore ..	P. Southend, May 6	HARRY WADSWORTH	Hull.....	New Orleans	At Norfolk (Va.) April 28
AUGUST KORFF..	Philadelphia	Manchester	At Liverpool, May 5	HELIOS.....	New York ..	Nordenhamn	At Bremerhaven, April 29
AUREOLE	New York ..	Bremerhaven	Arr. May 3	HERMIONE	New York ..	Hamburg ..	L. April 29
AZOV.....	—	—	Trading on W.C. of South Amca	HOTHAMNEWTON	Kustendje ..	Calais	Arr. May 3
BAKU STANDARD	Philadelphia	Rouen	Arr. May 4	IMPERIAL	—	—	Tr. on Lakes btn. U.S.A. and Can.
BALAKANİ	—	Beckton	Arr. May 4	IOANNIS COUTZIS	Batoum	Dunkirk	Ar. May 5
BATOUM	Alexandria ..	Novorossisk	P. Constant'ple, April 23	IROQUOIS	London	New York ..	Arr. May 5
BAYONNE	Trieste.....	Kustendje ..	Cld. Constant'ple, April 30	J.B.AUG.KESSLER	Samboe	Europe	Ashore, entrance Suez, May 7
BEACON LIGHT ..	Philadelphia	New York ..	L. May 7	JAMES BRAND ...	London	Port Arthur (Texas)	P. Lizard, May 2
BLOOMFIELD	Batoum	Manchester	P. Gibraltar, May 6	JULES HENRI	Marseilles ..	New York ..	P. Tarifa, April 30
BORJOM	Alexandria..	Batoum	P. Dardenelles, April 21	KURA	Kustendje ..	Hull	Arr. May 5
BRILLIANT	Tyne	New York ..	L. May 6	LA CAMPINE.....	Antwerp	Philadelphia	Arr. April 26
BROADMAYNE....	Rouen	Tyne	Arr. April 19	LA FLANDRE	New York ..	Ghent	L. April 24
BULLMOUTH	Soesoe.....	—	L. April 25	LA HESBAYE.....	New York ..	Antwerp ...	L. April 22
BULYSESSES.....	Kustendje ..	Calcutta	P. Perim, April 25	LA VIGUESA	Port Arthur (Texas)	Buenos Ayres	L. Mar. 13
BURGERMEISTER	Danzig	Philadelphia	At Halifax, April 20	LACKAWANNA....	Tyne	New York ..	Arr. April 28
PETERSEN	—	—	—	LANSING.....	San Francisco	Honolulu ..	Arr. April 24
CALCUTTA.....	San Francisco	Shanghai ..	Arr. abt. April 21	LE COQ.....	—	Tyne	Arr. April 29
CAPTAIN A. F. LUCAS	Hamburg ..	New York ..	L. May 1	LOUTSCH	Batoum	Odesa	In Port, Mar. 16, under repair
CARDIUM	Kobe	Balekpappan	L. April 27	LUCERNA	New York ..	Havre	L. April 23
CATANIA	Pt. San Luis	San Francisco	L. April 22	LUCILINE	Algiers	Rouen.....	L. May 2
CAUCASIAN	—	Kustendje ..	P. Tarifa, May 6	LUMEN.....	Philadelphia	Rouen.....	P. Del. Break., April 23
CHARLOIS	Amsterdam..	Philadelphia	Arr. April 25	LUX	—	Alicante	Arr. May 5
CHESAPEAKE	Cardiff.....	Liverpool ..	In Port, May 6	MAKKAVEI	Odessa	Batoum	L. May 2
CHESTER	Antwerp	Batoum	Off the Wight, May 2	MANHATTAN	Antwerp	Cardiff.....	In Port, May 6
CIRCASIAN PRINCE	—	—	Trading on W.C. of South Amca.	MANNHEIM	New York ..	Amsterdam..	Arr. May 5
CITY OF EVERETI	New York ..	Philadelphia	Arr. April 27	MARGARETHA ..	London	Kustendje ..	Arr. April 27
CLAM	Dunkirk	Constant'ple	P. Sagres, April 30	METEOR	Shanghai ..	—	At Suez, April 28
COL. E. L. DRAKE	Tacoma	San Francisco	Arr. Mar. 29	MEXICAN PRINCE	Philadelphia	La Pallice ..	Arr. May 5
COWRIE	Aroe Bay ..	Rotterdam ..	In Port, May 3	MIRA	Penarth	Port Arthur (Texas)	Arr. May 3
CUYAHOGA	Manchester	Philadelphia	P. Eastham, April 25	MUREX.....	Samboe	Colombo....	L. April 26
CYMBELINE	Port Arthur (Texas)	Amsterdam..	L. April 29	NARRAGANSETT..	London	New York ..	Arr. May 6
CZAR NICOLAI II.	Batoum	Hamburg ..	In Port, May 3	NERITE	—	—	Tr. in China Seas
DAGHESTAN.....	St. Louis (Rhône)	Batoum	P. Constant'ple, May 6	NEW YORK	Southampton	New York ..	In Wireless Com., Brough'd, May 4
DAKOTAH	San Francisco	Hong Kong..	Arr. abt. April 22	OAKWOOD	Cienfuegos & Thameshaven	Liverpool ..	P. Lizard, May 6
DELAWARE	Thameshaven	—	P. Dover, May 7	OBERON	New York ..	Hamburg ..	P. Dover, May 5
DERBENT	Antwerp	Batoum	P. Tarifa, May 1	OCEAN	Antwerp	Philadelphia	Arr. April 28
DEUTSCHLAND ..	Stettin.....	New York ..	In Tyne, April 25	OILFIELD	Kustendje ..	Batoum & London	L. May 6
DIAMANT'	Hamburg ..	Philadelphia	At New York, May 2	ORIFLAMME	—	Kustendje ..	P. Sagres, May 4
EDWARD DAWSON	Hull.....	New Orleans	Off the Wight, April 27	OSCEOLA	Montevideo	Dunkirk	L. April 28
ELAX	Batoum	—	Sd. Port Tewfik, April 22	OTTAWA	London	N. Orleans or Galveston	P. Sand Key, April 25
ELISE MARIE	New York ..	Swinemunde	L. April 29	OURAL	Batoum	Manchester..	P. Constant'ple, May 4
				PALEMBANG	—	—	Tr. East Indies & China Seas
				PAULA	Philadelphia	Stockholm ..	L. April 28
				PECAN	Philadelphia	London	L. May 2

Vessel.	From	For.	Latest Date and Position.	Vessel.	From.	For.	Latest Date and Position.
PENNOIL.....	Tyne	Philadelphia	P. Dunnet Head, May 3	STANDARD	Philadelphia	Danzig	P. Butt of Lewis May 3
PERLAK	Bangkok	Palembang..	L. Mar. 24	STROMBUS	Freshwater..	Europe	P. Malta, May 2
PHOEBUS	Hamburg ..	New York ..	In Tyne, May 6	SUN	Philadelphia & New York	Avonmouth	Arr. April 13
PINNA	Gaviota	Yokohama ..	L. April 30	SUNLIGHT.....	Sables.....	Bilbao.....	Arr. May 2, and in Port, May 4
POTOMAC	Philadelphia	Birkenhead & Manchester	P. Del. Break, April 25	SURAM.....	Dublin	Newport	In Port, May 4
PROMETHEUS....	New York ..	Rotterdam..	L. May 2	SUWANEE	Hull	London	Arr. May 6
PRUDENTIA	—	Singapore ..	Arr. April 12 for Amoy & Swatow	SVIET	Odessa	Batoum	L. April 18
QUEVILLY.....	Rouen.....	New York ..	L. Havre, May 2	TELENA	Singapore ..	Europe	P. Perim, May 6
RION.....	Philadelphia	Venice.....	L. April 28	TEREK.....	Port Arthur (Texas)	Hamburg ..	Arr. May 5
ROCK LIGHT	London	Kustendje ..	P. Dover, May 4	TIFLIS	Hamburg ..	Batoum	Arr. May 3
ROMANY.....	Soesoe	Samboe	L. May 1	TIOGA	Sunderland..	New Orleans	Arr. May 3
ROSSIJA	Barletta	Sfax.....	L. April 22	TONAWANDA	—	—	At Moji, April 22
ROTTERDAM	New York ..	Rotterdam ..	L. April 24	TROCAS	Samboe	—	At Suez, May 3
RUSSIAN PRINCE	New York ..	Tampico	L. April 16	TUSCARORA	Singapore ..	San Francisco	At Muroran, April 26
SALAHADJI	—	—	Tr. Sts. Settlem'ts and Java Seas	VEDRA.....	Palembang..	Nagasaki....	L. Singapore, April 24
SAN CRISTOBAL..	Rochester ..	Minatitlan ..	P. Sand Key, April 9	VILLE DE DIEPPE	Rouen	Philadelphia	L. April 1
SAN IGNACIO DE LOYOLA	Philadelphia	Pasages	Arr. Feb. 15	VOLUTE	Samboe	Calcutta....	Arr. April 28
SAXOLEINE	Tyne	New York ..	L. May 5	WASHINGTON ...	Messina	Kustendje ..	Arr. May 1
SEMINOLE.....	San Francisco	Shanghai ..	Arr. April 30	WEEHAWKEN	London	Grangemouth	Arr. May 1
SERVIAN	—	Batoum	P. Portland Bill, May 7	WILLKOMMEN....	Hamburg ..	Philadelphia	L. Tyne, April 30
SINGU	—	—	Tr. in East Indies	WINNEBAGO	San Francisco	Itosaki and Shanghai	L. Mar. 28
SNOWFLAKE.....	Penarth	Philadelphia	L. April 25				
SOYO MARU	Yokohama ..	Gaviota	L. April 5				
SPONDILUS	Rotterdam ..	—	P. Aden, April 20				

Latest Market Intelligence.

LONDON OIL MARKET.

Supplied by Messrs. Benjamin & Gee, 31, St. Mary Axe, E.C.

May 8th, 1908.

There are no changes to report in the price of Petroleum, quotations remaining as follows:—Russian, 5½d. to 6d.; American, 6½d. to 6¾d.; Water White, 7½d. to 7¾d.; Roumanian, 6¾d.

LUBRICATING OILS

are unaltered, the latest quotations being:—

American pale, £7 7s. 6d. to £11.

American dark cylinder, from £9 2s. 6d.

American filtered cylinder, from £11 15s.

No. 1 Russian, £10 5s.

TURPENTINE.

The market is very easy, and prices continue to fall:—American for spot and June delivery is 32s. 9d., and July to December, 33s. 3d.

LIVERPOOL OIL MARKET.

May 8th.

Refined oils are quiet, and sellers quote 6¾d. for Russian, Galician or Roumanian; and 7¼d. to 8¼d. per gallon for American.

PETROLEUM SPIRIT continues at 1s. 0½d. to 1s. 3d. per gallon for American deodorised, according to quality on the spot.

LATEST AMERICAN PRICES.

NEW YORK, May 7th.

Refined, in cases, is steady at 10.90; Standard White, 8.75; Credit balances, 1.78c.

PHILADELPHIA, May 7th.

Standard White is still quoted at 8.70.

RUSSIA.

BAKU, May 4th.

The Baku oil market is weaker. Crude oil, spot, 19½-19¾ copecs per pood. Residuals, future delivery, 23 copecs. Kerosene, in ships, 28 copecs.

BELGIUM.

ANTWERP, May 2nd.

The petroleum market is firm. Price of Standard White, spot, 22 francs per 100 kilos.

FRANCE.

PARIS, May 2nd.

Illuminating oil is quoted in bulk, in whole tank waggons, 21 francs per hectolitre; spirit, 31.75 francs per hectolitre. Special white oil, in barrels or cans, 29 francs per hectolitre.

GERMANY.

HAMBURG, May 2nd.

The kerosene market is quiet. The price of American Standard White is 7.55 marks per 50 kilos; Russian, 7.35 marks.

ROUMANIA.

May 3rd.

Crude oil from different fields, including	Francs.
pipe line charges, per 100 kgs. ...	4.70-4.80
Refined oil, exclusive of taxes ...	6.50
Benzine, 717-720, including taxes ...	20.00
Benzine, 750-760 ...	15.00-15.50
Residuals in tank waggons, at refinery ...	3.90-4.00
Paraffin ...	120.00

PRICES FOR EXPORT.

Refined oil in tank waggons, per 100 kgs.	7.50-8.00
Benzine, sp. gr. 0.710-0.715, f.o.b. ...	17.00-18.00
" sp. gr. 0.715-0.720 " ...	15.00-16.00
" sp. gr. 0.730-0.740 " ...	10.00-11.00
" sp. gr. 0.745-0.755 " ...	9.00-10.00

INDIA.

BOMBAY, April 18th.

Standard Oil Co., of New York.

Current rates are:—

American, "Snowflake," 150 deg. ..	Rs. 6 4 2
" Chester, 76 deg. ..	4 12 2
" Monkey Brand, 76 deg. ..	4 6 2
" Bulk, 125 deg. (in local made tins) ..	3 14 0
" " 125 deg. (8 Imperial gallons) ..	3 4 0

The Asiatic Petroleum Company, Limited.

Current rates are:—

Burmah, bulk, loose, "Swan," per unit ..	2 14 0
" " new, tins, "Swan," per pair ..	3 8 0
Russian, bulk, loose, "Rising Sun," per unit ..	3 6 0
" " new, tins, "Rising Sun," per pair ..	4 0 0
" Anchor," cases, per case ..	4 8 0

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IMPORTS of PETROLEUM into UNITED KINGDOM

Specially prepared for .
this Journal by . . .
the Custom House. .

FOR THE WEEK ENDED 27TH APRIL, 1908—

DATE.	PORT AND IMPORTERS.	DESCRIP- TION.	NO. OF GALS.	PORT WHENCE.
April. LONDON—				
21	Valvoline Oil Co. ..	Lub.	4,200	New York
21	T. H. Lee ..	Lub. Gr.	760	Hamburg
22	London and India Dock Co.	Lub.	280	"
22	R. Park and Co. ..	"	800	Marseilles
22	A. Brown and Co. ..	"	7,200	Philadel.
22	W. H. J. Alexander ..	"	2,050	New York
22	C. Price and Co. ..	"	270	"
22	British Petroleum Co. ..	Gas	1,350,000	Kustendje
	(James Brand)			
22	Produce Brokers' Co. ..	M.Lub.	7,200	New York
22	Fielder, Hickman and Co...	"	2,600	"
22	Anglo-American Oil Co. ..	Lub.	29,400	"
22	Beck and Pollitzer ..	"	260	"
22	" ..	Lub. Gr.	400	"
23	Anglo-American Oil Co. ..	Lub.	9,000	"
23	" ..	"	41,400	"
23	Mercantile Lighterage Co...	"	7,500	"
23	T. H. Lee ..	Lub. Gr.	80	Hamburg
23	Page, Son and East ..	Lub. Oil and Gr.	80	Antwerp
23	G. Haller and Co. ..	Lub. Gr.	120	"
23	" ..	Lub.	120	"
23	J. Harrison ..	Lub. Gr.	800	"
23	Wilkins, Campbell and Co ..	"	260	"
24	Bowring Petroleum Co. ..	M.Lub.	720	"
24	Union Lighterage Co. ..	"	782	"
24	W. B. Dick and Co. ..	Lub.	10,750	Philadel.
24	Anglo-American Oil Co. ..	Gas	856,410	Baltimore
	(Augusta)			
25	" ..	Lub.	2,000	New York
25	Ocean Oil Co. ..	"	6,400	Philadel.
25	Silvertown Oil Storage Co...	"	2,460	"
25	Lubricating & Fuel Oils, Ld.	"	6,150	"
25	T. H. Lee ..	"	210	Hamburg
25	London and India Docks Co.	"	930	"
27	Lubricating & Fuel Oils, Ld.	"	16,400	Antwerp
27	Page, Son and East ..	"	240	"
27	" ..	Lub. Gr.	320	"
27	G. Haller and Co. ..	Lub.	160	"
27	Ocean Oil Co. ..	"	2,400	Philadel.
27	" ..	"	4,000	"
27	Ragosine and Co. ..	"	4,160	"
27	Argo Steamship Co. ..	"	230	Bremen
LIVERPOOL—				
21	Pickfords, Ltd. ..	"	440	Hamburg
21	" ..	L. Paste	400	"
21	Schlieman's Oil Works ..	Lub.	120	"
21	Langley, Smith and Co. ..	"	1,200	"
21	Geo. B. Taylor ..	"	39,720	"
21	J. W. Fisher and Co. ..	"	1,240	New York
21	Ismay, Imrie and Co. ..	"	1,200	"
21	W. Gibson and Sons ..	Lamp	2,050	Boston
21	W. H. Stott and Co. ..	Lub.	120	Hamburg
21	C. W. Field and Co. ..	"	620	Antwerp

DATE.	PORT AND IMPORTERS.	DESCRIP- TION.	NO. OF GALLS.	PORT WHENCE.
April				
22	C. C. Wakefield ..	Lub. Gr.	245	Antwerp
22	Meade-King, Robinson & Co.	Lub.	13,400	Baltimore
22	J. Light and Son ..	"	1,000	New York
23	Bowring Petroleum Co. ..	"	1,450	Philadel.
23	W. B. Dick and Co. ..	"	35,780	"
23	Crew, Levick and Co. ..	M. Colza	9,130	"
23	" ..	Lub.	18,480	"
23	Meade-King, Robinson & Co.	"	36,320	"
23	Worthington and Boler ..	"	3,000	"
23	Vacuum Oil Co. ..	"	9,000	New York
23	" ..	Lub. Gr.	600	"
23	W. H. Samuel and Co. ..	Lub.	1,170	"
23	Co operative Wholesale Soc.	Lub. Gr.	580	Boston
25	George B. Taylor ..	Lub.	24,280	New York
25	Valvoline Oil Co. ..	"	5,330	"
27	W. B. Dick and Co..	"	16,550	"
27	" ..	Lamp	1,480	"
27	Cunard Steamship Co. ..	Lub. Gr.	300	"
27	W. Gibson and Sons ..	Lamp	2,080	Boston
27	Penwarden and Jackson ..	Lub.	250	Antwerp
BRISTOL—				
22	H. R. James and Sons ..	"	30,600	New York
21	" ..	M. Colza	9,560	"
21	H. Pritchard and Co. ..	Lamp	2,180	"
21	W. Smith and Co. ..	Lub.	17,600	"
21	Pickford's, Ltd. ..	L. Paste	330	Hamburg
21	E. Stock and Sons ..	Lub.	2,000	"
CARDIFF—				
21	British Petroleum Co. ..	"	960	Antwerp
25	Guthrie, Heywood and Co.	"	8,750	Baltimore
GRIMSBY—				
21	J. Sutcliffe and Sons ..	"	40	Hamburg
23	" ..	"	120	Antwerp
23	" ..	"	96	"
24	" ..	"	400	"
25	" ..	"	480	"
HARWICH—				
23	D. Howard ..	"	410	"
23	" ..	"	40	"
24	" ..	"	260	"
HULL—				
21	Thos. Wilson, Sons and Co.	"	1,000	New York
21	" ..	"	35,120	"
21	" ..	"	7,080	"
21	Wilsons and N.E. Railway Shipping Co.	"	400	Hamburg
23	W. Gilyott and Co. ..	"	45,280	New York
24	T. Wilson, Sons and Co. ..	"	280	Drontheim
24	Wilsons and N.E. Railway Shipping Co.	"	1,300	Hamburg
24	" ..	"	480	Ghent
MANCHESTER—				
22	Lamport and Holt ..	"	1,200	New York
27	J. T. Fletcher and Co. ..	"	160	Antwerp

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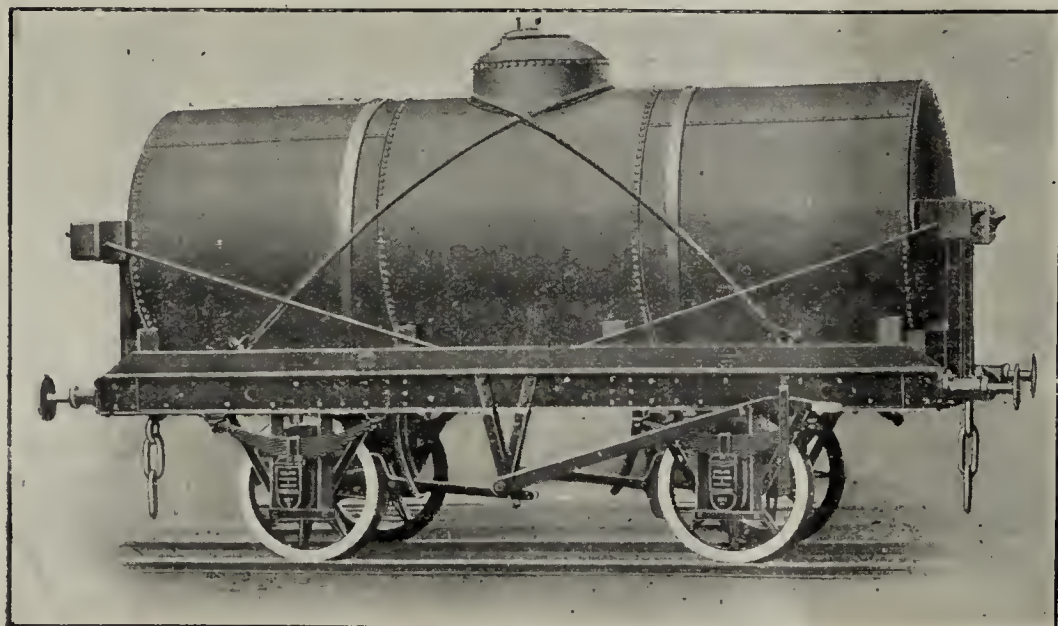
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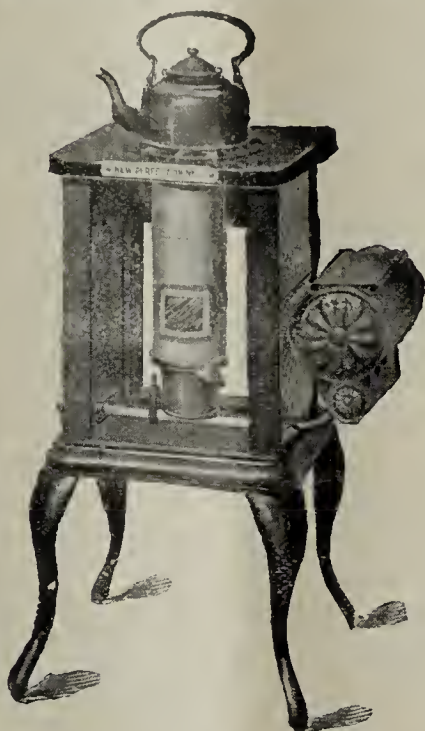
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Best Welsh Soft Siemens-Martin Steel.
No imported steel used.

— QUOTATIONS ON APPLICATION.

IMPORTS.—(Concluded).

DATE.	PORT AND IMPORTER.	DESCRIPTION.	NO. OF GALLS.	PORT WHENCE.
April				
23	D. Currie and Co. ..	Lub.	560	Hamburg
24	J. T. Fletcher and Co.	"	1,200	Antwerp
24	"	"	120	"
	NEWCASTLE—			
25	Tyne-Tees S.S. Co...	"	160	Hamburg
25	"	"	2,030	Antwerp
	NEWPORT—			
21	Jones, Heard and Co.	"	3,000	New York
23	Mordey, Jones and Co.	Lub.Gr.	70	Antwerp
	PLYMOUTH—			
21	Bristol Steam Nav. Co.	Lub.	600	"
	ABERDEEN—			
25	R. Cannon Reid and Co.	L. Paste	170	Hamburg
	GLASGOW—			
23	Anchor Line ..	Lub.	21,880	New York
23	Burrell and Son ..	Resid.	2,740	Trieste
23	Donaldson Bros.	Lub.	2,600	Baltimore
27	J. and A. Allan ..	"	18,900	Philadel.
27	"	M. Colza	2,200	"
	GRANGEMOUTH—			
24	W. Graham-Yooll and Co...	Lamp	2,000	Hamburg
	LEITH—			
20	J. Currie and Co. ..	Lub.	1,710	"
21	W. Graham-Yooll and Co...	Lamp	2,180	"
23	"	"	4,360	"
23	Geo. Gibson and Co.	Lub.	4,000	Antwerp
27	T. Cowan ..	"	5,000	Treport
	LERWICK—			
27	A. Mathieson..	Lamp	200	Christiania
	BELFAST—			
27	G. Heyn and Sons ..	Lub.	800	Riga
			2,849,613	
	Deduct to correct—			
	HULL—			
8/4	T. Wilson, Sons and Co. ..	Lub.	4,200	New York
10/4	"	"	15,600	"
7/4	"	"	3,360	Reval
	DUBLIN—			
28/3	Palgrave, Murphy and Co.	Lamp	7,040	N. Orleans
	Total for Week ..		2,819,413	

FOR THE WEEK ENDED 4TH MAY, 1908—

April	LONDON—			
28	Mordaunt Bros. ..	Lub.	10,000	New York
28	Produce Brokers ..	"	4,800	"
28	Anglo-American Oil Co. ..	"	18,000	"
28	London & India Docks Co..	"	600	"
28	Mercantile Lighterage Co.	"	650	"
28	Fielder, Hickman and Co...	"	10,120	"
28	"	"	10,000	"
29	Worthington and Boler ..	"	4,400	Philadel.
29	Anglo-American Oil Co. ..	"	42,920	"
29	Mordaunt Bros. ..	"	2,500	"
29	Beck and Pollitzer ..	Lub Oil and Gr.	140	New York
29	J. Spurling ..	Lub.	80	Antwerp
30	Produce Brokers ..	"	5,200	Philadel.
30	Perkins and Homer..	"	4,000	"
30	M. Record ..	"	4,000	"
30	A. Brown and Co. ..	"	4,000	"
30	J. W. Starkey ..	"	11,240	"
30	Anglo-American Oil Co. (Delaware)	Naph.	629,000	"
30	W. H. J. Alexander ..	Lub.	4,510	"
30	Mercantile Lighterage Co...	"	6,000	"
30	London and India Docks Co.	"	3,300	Hamburg
30	"	"	550	"
30	T. H. Lee ..	Lub.Gr.	520	"
30	J. Harrison ..	Lub.	130	Antwerp
30	"	Lub.Gr.	200	"
30	British Petroleum Co. ..	Lub.	800	"
30	Page, Son and East ..	"	880	"
May				
1	Mercantile Lighterage Co...	"	33,250	Philadel.
1	E. J. Walkenshaw ..	"	10,000	"
2	British Petroleum Co. (Balakani)	Lamp	1,441,000	Hamburg
2	Anglo-American Oil Co.	Lub.	27,960	Philadel.
4	J. Spurling ..	Lub.Gr.	200	New York
4	Mordaunt Bros. ..	Lub.	6,700	"
4	G. Haller and Co. ..	Lub.Gr.	320	Antwerp
4	Page, Son and East ..	"	320	"
4	"	Lub.	600	"
4	Leach and Co., Ltd. ..	"	170	Ghent

DATE.	PORT AND IMPORTERS	DESCRIPTION.	NO. OF GALLS.	PORT WHENCE.
April	LIVERPOOL—			
28	G. B. Taylor ..	Lub.	30,560	New York
28	Davies, Turner and Co. ..	Lub.Gr.	1,200	"
30	Meade-King, Robinson & Co.	Lub.	25,120	"
May				
2	Pickfords ..	Lub Oil and Paste	300	Hamburg
2	Vacuum Oil Co. ..	Lub.	8,560	New York
4	Pitt and Scott ..	Lub.Gr.	70	"
4	C. W. Field ..	Lub.	200	Antwerp
4	Meade-King, Robinson & Co.	"	24,960	Hamburg
4	W. H. Samuel and Co. ..	"	1,000	New York
4	G. B. Taylor..	"	32,120	"
4	Langley, Smith and Co. ..	"	1,900	"
April	BRISTOL—			
28	Heaton and Co. ..	"	560	Antwerp
28	W. G. Clarke ..	"	900	"
28	H. R. James and Sons ..	"	2,400	New York
30	H. Pritchard and Co. ..	"	4,200	"
30	H. R. James and Sons ..	"	20,360	"
May				
1	W. Smith and Co. ..	"	21,200	"
1	Ford and Canning ..	"	4,400	"
1	Anglo-Bosphorus Oil Co. ..	Lub.Gr.	1,000	Hamburg
April	GRIMSBY—			
28	J. Sutcliffe and Son ..	Lub.	330	"
28	"	"	120	Antwerp
	HARWICH—			
30	D. Howard ..	"	20	"
	HULL—			
29	T. Wilson, Sons and Co. ..	"	1,000	Riga
30	"	"	200	Christiania
	MANCHESTER—			
29	Pickford's, Ltd. ..	L. Paste	550	Hamburg
29	J. T. Fletcher and Co. ..	Lub.	240	Antwerp
30	Lamport and Holt ..	"	4,400	New York
May				
1	George B. Taylor ..	"	178,440	"
4	Meade-King, Robinson & Co.	"	13,000	Hamburg
4	"	"	53,440	Philadel.
4	"	"	4,000	New York
4	W. Hodgson and Co. ..	"	2,420	"
April	NEWCASTLE—			
30	P. H. Matthiessen and Co.	"	210	Bergen
30	"	"	170	"
May				
2	Tyne-Tees Steamship Co. ..	"	410	Hamburg
	PLYMOUTH—			
4	Bristol Steam Navigation Co.	Lub.Gr.	170	Antwerp
April	SOUTH SHIELDS—			
30	British Petroleum Co. (Aras)	Lamp	373,600	Baltimore
	SWANSEA—			
28	Richards, Turpin, and Co...	Lub.	2,400	New York
May				
1	Burgess and Co. ..	L. Paste	150	Hamburg
April	GLASGOW—			
28	Clyde Shipping Co... ..	Lub.Gr.	370	Antwerp
30	Anchor Line ..	Lub.	57,310	New York
30	"	M. Colza	5,000	"
May	GRANGEMOUTH—			
1	W. Graham-Yooll and Co...	Lamp	2,800	Hamburg
1	J. Currie and Co. ..	Lub.	2,200	"
April	LEITH—			
28	J. Cormack and Co. ..	"	1,200	Riga
May	LERWICK—			
1	Olna Whaling Co. ..	"	90	Tonsberg
April	BELFAST—			
30	J. C. Pinkerton and Co. ..	"	150	Hamburg
	Deduct to correct:—		3,184,460	
	LIVERPOOL—			
4/4	Anglo-American Oil Co. (Genesse)	Gas	6,700	Sabine
	Total for the Week ..		3,177,760	
	Total for the Fortnight ..		6,027,173	

BORE HOLES FOR OIL

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The Petroleum Review.

By PAUL DVORKOVITZ.

Vol. XVIII. (New Series.)

MAY 23RD, 1908.

No. 425.

THE PETROLEUM REVIEW:

The ANNUAL SUBSCRIPTION for both English and Foreign readers is 26s., including Postage. Single Copies may be had at the offices at 1s.

The Editor would esteem it a favour if readers, when communicating with the various firms advertising in our pages, would mention the "Review."

Contributions upon items of interest are always welcomed from subscribers, but in each case these should be accompanied with the name and address of the sender, not necessarily for publication.

Editorial Notes.

There are, we should imagine, comparatively very few of those engaged in the petroleum trade of this country who have given anything like serious consideration to the Daylight Saving Bill which is now before Parliament, yet nevertheless should this become law, the effect upon the whole of our English oil trade is bound to be one of considerable injury. So far as we recollect, it is the first time a Member of Parliament has been bold enough to suggest the passing of a law by which the use of artificial light will be greatly decreased. There are of course arguments *pro et con.* and whether the suggested arrangement of altering the time would glide along so gently as is anticipated may be open to doubt, but the fact remains that one of the chief arguments put forward by those who advocate the passing of the Bill is that the saving to the nation upon artificial light would amount to something like £2,500,000 per annum. If this be so, the effect which the new scheme would have upon the oil trade of this country would be very serious indeed, for it would mean a very considerable diminution in the consumption of illuminating oil, while, a decreased use of gas would also tend to greatly decrease our gas oil import trade. The closer one looks into the measure, the more one is bound to recognise the injurious effect it would have upon the oil trade, and consequently it is not too much to hope that some attempt will be made by the oil trade to cast its unanimous voice directly against the scheme as a whole.

One of the most interesting articles which it has been our privilege to publish for a long time is that to be found upon other pages of this issue, coming from the pen of the REVIEW'S Special Correspondent, and dealing with that prolific territory in the Mid-Continental fields of America, known as the Glenn pool. As our readers are aware, so much of a very flimsy nature has been said of this new oil district of late, that it is quite an agreeable change to read a serious article dealing with the whole situation there.

People are apt to too quickly jump at conclusions and this may be the only excuse for many newspaper representatives prophesying the early downfall of the field, as soon as the figures of output displayed some signs of falling off. Discovered quite accidentally, the Glenn pool, like most other prolific oil territories, came in with a rush, and almost immediately an abnormal state of affairs was created, the recent financial crisis in America on the one hand, and the enormous production of the Glenn field on the other, combining to create a situation not easily describable. For the first time, however, we are able to publish an authentic account of the developments in the Glenn pool, the present situation, and a careful prophecy of what the future has in store, and we feel sure the illustrated article will be perused upon all hands with the greatest interest. We are especially pleased to be in a position to publish the latest information which will most assuredly have the effect of clearing the atmosphere in regard to the outlook in this, the most prolific, of America's petroleum producing territories.

The Austro-Hungarian refiners are making fresh efforts to re-establish the Galician Refiners cartel. The competition on the home market has become very severe, and prices Desire a Legalised Cartel. have in consequence declined enormously, so that an arrangement of some kind has become imperative. One of the questions now under consideration is the joint sale of paraffin, and it is proposed that all refiners shall entrust the sale of their paraffin scale to the Olex Company, which already controls the export trade. This seems to suggest an idea of the ultimate solution of the main problem by making the Olex Co., in which all the leading refineries are already interested, the central selling organisation for all the Austro-Hungarian refineries. It is suggested from some quarters to bring pressure to bear upon the Provincial and Imperial Governments to pass a law to regulate the home petroleum trade after the manner of the recently passed Roumanian law, which should, however, also regulate the price of crude oil, by fixing a minimum self-cost. The promoters of this project explain in its justification that voluntary combinations in the petroleum industry lack permanency and stability, as shewn by the example of the Ropa and the Petrolea organisations, and the petroleum industry can be placed in a permanently sound basis only by Government action.

A very gratifying increase of activity combined with fairly successful results April in the American Fields. is the one outstanding feature in the statistics of the operations in the American fields during the month of April. With the advent of better weather, operators are inclined to extend their prospecting work as much as possible, and this is shewn by the fact that during April there was greater activity in the fields than has been the case for

many months past. The new production also shewed up well, though the increase in this direction was insufficient to act as a total set-off for the great drop registered in March. Throughout the Pennsylvanian fields the drill was very busy during April, but the main part of the new production which is the result of somewhat extensive drilling is mainly supplied by those fields yielding the lower grades of oil. An improvement in the situation is reported from the Mid-Continental fields, but prospective pipe line extensions have again been halted by restrictive legislation. The latest reports from California are decidedly satisfactory, but those from Texas are not so rosy.

THE REPORT OF THE TARBRAX OIL COMPANY.

The report by the directors states that after providing for the maintenance of the works and mines during the year, and including the sum of £3,542 brought forward from last year, there is a balance at the credit of profit and loss account of £23,072, from which falls to be deducted interest on loans £1,902, leaving £21,169, which the directors recommend should be disposed of as follows:—In writing off for depreciation, £6,000; in payment of a dividend at the rate of 6 per cent. on the preference shares, £2,400; in payment of a dividend at the rate 15 per cent. on the ordinary shares, £9,750, leaving a balance of £3,019 to be carried forward to the current year. An abundant supply of shale has been obtained during the year, and the mining developments are now considerably in advance of present requirements. The works have been fully employed, and there have been no interruptions. The cost of production was adversely affected by the high price of coal and high rates of wages. A substantial reduction has already taken place in the price of coal, and a return to normal conditions may be expected soon. In the original crude oil agreement with the Pumpherson Oil Co., Ltd., some omissions were made, which, subject to the approval of the company, have been corrected by an amending agreement. This agreement will be submitted at the meeting for the formal approval of the shareholders. The directors have resolved to issue the small remaining balance of 10,000 preference shares in order to partially liquidate loans.

ROUMANIAN PETROLEUM EXPORTS.

STATISTICS FOR MARCH.

The following are the official figures of the exports of petroleum products from Roumania in March:—

Destination	Crude, gas oil, residuals, etc.	Illumi- nating and Distillate.	Benzine.	Total.
	Tons.	Tons.	Tons.	Tons.
Algeria	1	—	3,491	3,492
Austria-Hungary ..	572	3,306	99	3,977
Belgium	10	—	—	10
Bulgaria	136	34	25	195
England	10,208	—	—	10,208
Egypt	298	15,148	—	15,446
France	197	5,075	7,524	12,796
Greece	—	—	5	5
Germany	—	—	2,922	2,922
Holland	4,399	—	—	4,399
India	—	7,074	—	7,074
Italy	24	14	220	258
Servia	2	—	—	2
Turkey	147	2,018	9	2,174
Total	15,994	32,679	14,295	62,958
Total, March, 1907	7,362	14,177	10,984	32,523

LONDON OIL SHARE MARKET.

FRIDAY, MAY 22ND, 1908.

The Oil Share Section of the Miscellaneous Market of the London Stock Exchange continues to be absolutely neglected, and where changes occur they are almost invariably of a downward character, although this is not so much due to the sale of shares as to the fact that quotations sag away for want of upholding.

The first change to occur from the figures published in our last issue was a fall of 6d. in both Russian Ordinary and Preference at 2s. to 3s. in each case. Schibaieff Ordinary also lost 6d. per share at 1s. 6d. to 2s. 6d., and the Preference $\frac{1}{8}$ at $\frac{3}{4}$ -1. Californian Oilfields are ex-dividend at 5 $\frac{3}{8}$ -5 $\frac{5}{8}$, but there is no other alteration to report, although the Debentures are quoted 2 per cent. higher at 98-101.

European Six Per Cent. First Mortgage Debentures have lost a point at 69-73, and Shell Transport Ordinary, after falling at one time to 43s. 6d. to 44s. 6d., have fluctuated within narrow limits, and partially recovered the loss at 44s. 6d. to 45s. 6d. The Preference Shares are also easier, having lost $\frac{1}{4}$ on balance at 9 $\frac{3}{4}$ -10 $\frac{1}{4}$.

At the Mid-May Settlement, which commenced on Tuesday, the 12th inst., there was practically no Account to adjust, the rate of interest being generally cited at about 5 per cent. to 7 per cent. A comparison of making-up prices with those fixed at the preceding Account shews a depreciation in value in the majority of instances. Russian Ordinary and Preference lost 6d. per Share at 2s. 9d. and 3s. respectively, Schibaieff Ordinary a similar amount at 2s., and the Preference $\frac{1}{8}$ at $\frac{1}{8}$, while Spies declined 9d. at 9s. and Anglo-Russian Petroleum 6d. at 6d.

The only rise to report is in Californian Oilfields, which have improved 1s. 3d. per share at 5 $\frac{3}{4}$, while there is no change in Baku Ordinary at $\frac{1}{8}$; the Preference at $\frac{1}{8}$, and Shell Transport Ordinary at 45s. 3d.

CONGRATULATIONS TO

SIR ALBERT C. C. DE RENZY.

The congratulations of the whole of our readers, we are sure, go out with ours to Surgeon-General Sir Albert C. C. De Renzy, K.C.B., upon his attaining his eightieth birthday. Sir Albert has for a long time been actively and honourably associated with the petroleum industry, as a director of the Assam Oil Co., while even recently, despite his age, he has found time and energy to take part in the agitation directed against the management of the Baku Russian Petroleum Co., for he has taken a most prominent part in the early committee work in this direction.

THE BAKU RUSSIAN PETROLEUM COMPANY, LTD.

The directors of the Baku Russian Petroleum Co., Ltd., have at last recognised that it is advisable to take the Shareholders' Committee into their confidence in order to attempt to place the concern upon a sound commercial basis, and several meetings have recently been held between the two bodies in the hope of arriving at an early settlement. The most recent meeting was held yesterday (Friday), but was eventually adjourned until one day next week, when it is expected that some decision of great advantage to the whole of the shareholders will be arrived at.

Improvements in the Apparatus for Deep Well Boring.

A NEW ENGLISH PATENT.

A patent has recently been granted to Mr. R. Wood, of 8, Olympia Gardens, Morpeth, Northumberland, for an invention relating to percussive core-boring tools for deep boring. As is known, core-boring tools for deep boring comprise a cutter attached to and suspended and operated by a hollow or tubular shank or stem composed of sections or lengths of tubing screwed or otherwise connected together, and with such tools it is necessary to circulate water about the cutter to carry away the powdered debris or sludge. At present it is customary to force water from the surface down between the shank or stem of the tool and the boring; which water, after circulating about the cutter, gathers the powdered debris and passes up through the shank or stem to the surface again. Thus it is necessary to provide the tool with a shank or stem, extending from the bottom of the boring to the surface, and to lengthen the stem as the boring proceeds. As the boring proceeds, the stem, as will be obvious, soon becomes of considerable length, and is difficult to handle and operate, and considerable time is occupied in withdrawing the tool to extract the core.

The object of the present invention is to provide a core-boring tool which may be suspended and lowered by a chain or the like as the boring proceeds, thus over-coming the necessity of lengthening the shank or stem and the consequent disadvantages.

According to the invention the patentee provides a percussive core-boring tool with a pump or means adapted to be operated by the reciprocating movements of the tool, for circulating water, either supplied to or collecting in the boring, about the cutter.

Fig. 1 is a central vertical section of a core-boring tool, embodying one form of improvements, and Fig. 2 is a part similar view to a larger scale. In a percussive core-boring tool made in accordance with form of the invention, the cutter *a* is attached to a shank *b*, comprising a lower or core tube *c* and an upper or sludge tube *d* connected together by a screwed ferrule or ferrules *e* or otherwise suitably. The cutter *a* is attached to the lower end of the core tube *c* by a screwed ferrule *f* or in any convenient manner, and the teeth or cutting edges *g* of the cutter are splayed or enlarged as usual,

so that the cutter cuts a boring *h* of greater diameter than the external diameter of the shank *b* and a core *j* of less diameter than the internal diameter of the core tube *c*. The upper end of the sludge tube *d* is connected to a solid rod *k* or otherwise suitably weighted, and the upper end of the shank is provided with feathers or guides *m* for maintaining the tool plumb in the boring. The core tube *c* is separated from the sludge tube *d* by a diaphragm *n*, and communicates therewith by means of a small tube *o* extending for a suitable distance into the sludge tube *d*, and provided with a ball or other suitable

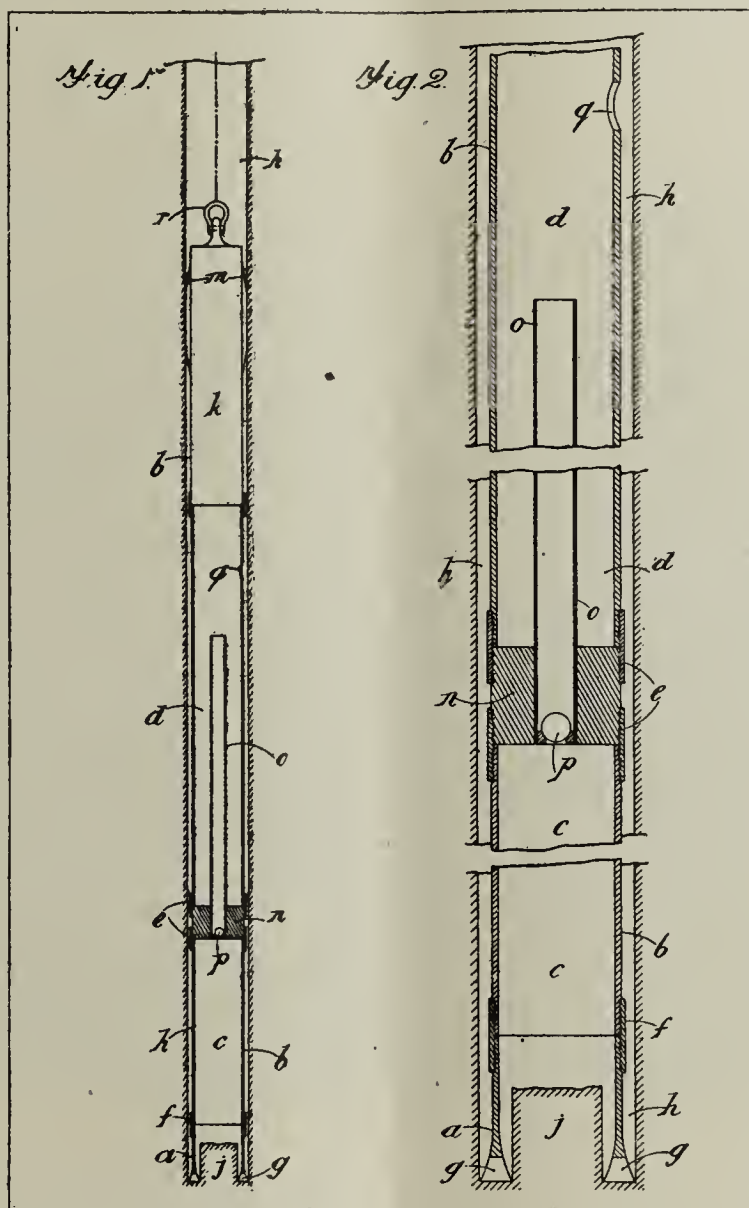
non-return valve *p* opening upwardly, and the sludge tube *d* is provided with an opening or openings *q* above the upper end of said small tube *o*.

In use the tool is suspended within the boring *h* and lowered as the boring proceeds by a chain, wire rope or the like, attached to a shackle *r* at the upper end of the shank *b*, and is reciprocated or operated by hand, mechanical power or otherwise suitably. The downward reciprocating movements of the tool cause water, either supplied to the boring *h* or collecting therein, to flow up the core tube *c* carrying the powdered debris with it to the small tube *o* aforesaid, past the valve *p* therein, which opens and up through the small tube *o*, whence it overflows into the sludge tube *d*. When the water overflows into the tube *d* the suspended powdered debris or solid matter settles

to the bottom of the annular chamber in the sludge tube *d* between the same and the small tube *o*, and the water rises in the sludge tube *d* until it reaches the opening or openings *q* aforesaid, through which it escapes or flows into the boring *h* again.

The non-return valve *p* in the small tube *o* prevents the water and suspended powdered debris in same flowing back into the core tube *c* during the upward movements of the tool.

Thus, when the tool is in operation, the small tube *o* and valve *p* act as a pump and maintain a constant circulation of water through the boring *h* about the cutter *a* and through the core and sludge tubes *c* and *d*, and the annular space between the sludge tube *d* and the small tube *o* acts as a trap or receiver for the debris carried by the water and from which the



debris can be removed by disconnecting the diaphragm *n*.

In some cases the valve *p* may be arranged within the sludge tube *d* which may be reduced in diameter and the trap tube *o* is disposed outside of or around the sludge tube *d*, the opening or openings *q* in such cases being arranged below the upper end of the trap tube *o*, so that the water and the suspended debris are delivered to the trap tube, the debris settling to the bottom of the trap tube and the water overflowing over the upper end of same into the boring.

During operation the tool will be rotated by ratchet mechanism as usual or by any suitable means.

It will be seen that, as the improved tool is provided with means for circulating the water, there is no necessity to provide it with a shank or stem reaching to the surface or to lengthen the shank or stem as the boring proceeds, and the tool can be readily suspended by a chain or wire rope.

Lightning Disasters in the Glenn Field.—Considerable havoc was recently done by lightning in the Glenn field. A large steel tank belonging to the Gulf Co and containing 50,000 barrels of crude was destroyed, and shortly afterwards tanks belonging to the following firms were, together with their contents, destroyed by the lightning:—The Selby Oil Co., the Glenn Oil Co., the Creek Oil Co., the Texas-Oklahoma Oil Co., the Reese Oil Co., Heywood Oil Co., and also three tanks belonging to Mr. E. J. Bonacker.

PRODUCTION OF ENGLISH COMPANIES IN RUSSIA.

BAKU RUSSIAN PETROLEUM Co., LTD.—The production for the week ended May 9th was 185,000 poods, or 2,982 tons; and for the week ended May 16th was 157,000 poods, or 2,531 tons.

RUSSIAN PETROLEUM AND LIQUID FUEL Co., LTD.—The production for the week ended May 9th was 215,000 poods, or 3,466 tons; and for the week ended May 16th was 186,000 poods, or 2,999 tons.

SPIES PETROLEUM Co., LTD.—The output for the week ended May 10th was 260,625 poods, or 4,203 tons, of which the fountain in No. 5 well, on plot Baskakoff, gave 120,535 poods, or 1,944 tons. The total production from this fountain to the 10th May was 2,334,010 poods, or 37,645 tons. The well ceased spouting on the 10th inst., and is now baling. The production for the week ended May 17th was 145,285 poods, or 2,342 tons. The decrease is due to the stoppage of the fountain in No. 5 well, on plot Baskakoff, and the well has been in course of deepening since the 11th inst.

THE EUROPEAN PETROLEUM Co., LTD.—The production for the week ended May 10th was 127,656 poods, or 2,058 tons; and for the week ended May 17th was 116,160 poods, or 1,873 tons.

DETAILS OF BAKU PRODUCTION AND BORING DURING JANUARY, 1908.

The following are the details of the production of crude oil at the Baku oil fields during January, as published in the latest issue of the *Neftiannoie Dielo* (in poods):—

						PRODUCTION (in poods).				Average per Well per Day			
						By Baling.	By Spouters.	Casual.	Total.				
						Number of Wells in Exploitation.							
Balakhany	594	4,825,914	—	2,528	4,828,442	279		
Saboontchi	645	14,489,834	416,000	289,534	15,195,368	806		
Ramany	180	5,977,608	—	150,020	6,127,628	1,175		
Bebe-Aibat	234	10,357,306	3,148,324	28,425	13,534,055	2,013		
Total in January, 1908						1,653	35,650,662	3,564,324	470,507	39,685,493	824
Total in December, 1907						1,737	38,603,658	2,231,492	410,322	41,245,472	791
Total in January, 1907	1,660	35,509,023	2,325,000	378,688	38,212,711	866

The production by spouters in January was obtained from the following wells:—

Well No.	Plot No.	At	Company	Poods.
61	35/c	At Saboontchi	Neft Co.	416,000
25	27	Bebe-Aibat	Nobel Bros.	1,960,924
73	Group XIX.	"	Russian Pet. and Liquid Fuel Co.	37,300
7	Plot No. 29	"	Schibaieff Co.	27,500
6	II	"	Russia Bebe-Aibat Co.	5,000
7	"	"	"	17,600
34	XX.	"	Zoubaloff	1,100,000

DETAILS OF BAKU PRODUCTION AND BORING DURING FEBRUARY, 1908.

The following are the details of the production of crude oil at the Baku oil fields during February, as published in the latest issue of the *Neftiannoie Dielo* (in poods):—

						PRODUCTION (in poods).				Average per Well per Day.			
						By Baling.	By Spouters.	Casual.	Total.				
						Number of Producing Wells.							
Balakhany	660	5,010,974	—	4,490	5,015,464	281		
Saboontchi	632	13,965,444	—	287,418	14,252,862	819		
Ramany	191	5,936,820	—	35,774	5,972,594	1,137		
Bebe-Aibat	230	9,333,352	905,286	47,029	10,285,667	1,679		
Total for February, 1908						1,713	34,246,590	905,286	374,711	35,526,587	761
Total for January, 1908						1,653	35,650,662	3,564,324	470,507	39,685,493	824
Total for February, 1907						1,668	35,643,248	1,649,500	381,717	37,674,465	909

The production by spouters in February, all at Bebe-Aibat, was obtained from the following wells:—

Well No.	Plot No.	At	Company	Poods.
34	XX.	Bebe-Aibat	Zoubaloff	500,000
25	27	Bebe-Aibat	Nobel Bros.	222,786
27	Group XIX.	"	Russian Petroleum and Liquid Fuel Co.	55,000
73	"	"	"	127,500

THE GLENN POOL.



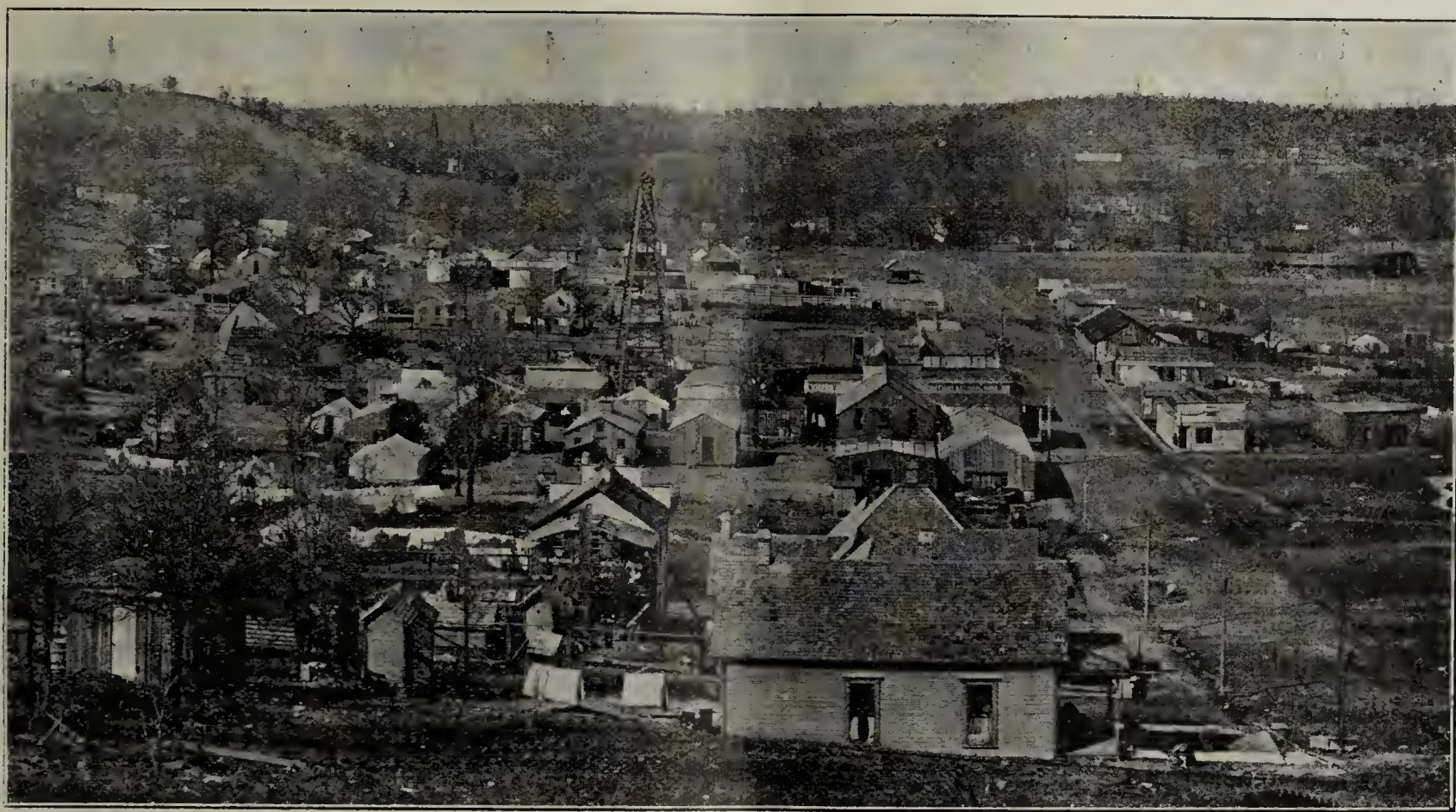
Interesting Details of . . .
Developments.

(From Our Special Correspondent.)

The Glenn pool, which is now considered to be one of the most important oil fields in America, lies in the north-eastern part of the new State of Oklahoma, and is easily reached by means of the Atchison, Missouri-Kansas, and Rock Island systems, all of which converge in Tulsa. This town, of very recent growth but substantially built, now has close on 20,000 people, and though situated some 18 miles north of the pool, is its commercial and financial centre. It is true that the town of Sapulpa lies nearer to the fields, but Sapulpa has the reputation of being too "slow," and hence most oil men live in Tulsa; nearly all oil companies have their offices there, and the supply companies likewise make it their headquarters. From Tulsa the so-called oil flyer leaves

The Glenn pool is about two years old. It derives its name from the Glenn farm, on which the first oil was found, and it is a curious circumstance that, had the first well been drilled only a few hundred feet further to the east, a dry hole would have been struck, and the pool might not have been discovered for years.

Glenn pool belongs, undoubtedly, to a series of subterranean reservoirs, which stretch from Kansas almost straight south into Texas; but from all these so-called shallow fields it distinguishes itself by a uniformity of thickness of its oil bearing sand, and in the eyes of all those qualified to judge makes it now rank in importance as an oil field immediately after the Baku district, and before any other American field. There are at present



A CORNER OF THE FAMOUS POOL. SHEWING THE DWELLINGS

every morning for the fields, traversing the older but less important Red Fork oil fields and a number of isolated oil and gas wells; it stops at Kiefer, which lies virtually in the middle of the pool.

The pool itself is about five miles square, and covers two ranges of low hills and an intervening valley. Leaving the train at a small station just before Kiefer, by name of Haywood, we ascend a hill from where an excellent panoramic view can be obtained. It is not often that an oil field can claim to be described as picturesque; but here, with the fresh spring foliage covering the hills and the new grass carpeting the valley, with the hundreds of derricks peeping out from among the trees, the presence of the oil wells detract nothing whatever from the charm of the Oklahoma landscape; on the contrary, the banks, sheds and derricks, and the dull roar of the petroleum fires in the boilers, only add animation to quite a paintable scene.

about 1,200 wells in the field; not a single dry hole has ever been struck within its boundaries; everywhere the oil sand has been found without fail at a depth of from 1,400 to 1,700 feet; and everywhere the oil bearing stratum has been proved to be from 70 to 110 feet in thickness. As far as is known, no well has ever been drilled right through the sand, and it is said that the fear of finding water causes owners of wells to go very gingerly; but it is not supposed that the sand found in the deepest places extends beyond 130 feet.

Drilling on a large and increasing scale may be said to have begun early in 1907, and especially in the autumn of last year a great many wells were brought in. Since then little new drilling has been done, chiefly by reason of the glut of production; as the maximum production was reached in October or November last, when a great number of new wells produced enormous amounts of oil. Since then there has been a declining

production, partly due to natural causes, and partly to extraneous circumstances. The natural causes are, of course, the lessening of the natural gas pressure; each well begins with a rush, and gradually subsides afterwards. To the extraneous circumstances which have tended to reduce production I shall refer presently.

There are no accurate collective statistics shewing the total production of the pool; where properties are worked by joint stock companies data are generally available, but there are many private owners, who care more for oil than for statistics. Besides, most of the companies are close corporations, whose shares are in a few hands, and their owners either do not want, or else do not care, to have their production known. But when at its zenith, the production cannot have fallen far short of 200,000 barrels a day, and the pool is credited with having produced in 1907 something like 35,000,000 or 40,000,000 barrels. At the present moment, however, its production is certainly much less, probably somewhere between 55,000 and 65,000 barrels a day. Its intensity differs vastly on different properties, some being worked at almost full pressure, and others being practically shut down for some reason or other, but mostly because the owners do not care to produce and sell oil at the present low price.

This question of price is to-day undoubtedly the ruling factor in the pool. The official quotation for oil has now been steady at 41 cents per barrel for about six months, this price being only about one-fourth of that paid for practically the same oil in Pennsylvania, Ohio, etc. The reason of its being so low is that the production has considerably outrun the capacity of the pipe lines. There are now three pipe lines in the field, viz., the Prairie, Gulf, and Texas Company's. No outsider knows the amount of their daily runs from the Glenn pool, their statistics lumping together all runs from all the Mid-Continental fields; but there is no doubt that but a part of the oil produced has been carried, and most producers would not have known what to do with their oil had not the pipe line companies been prepared at all times to buy full steel tanks at the rate of 41 cents per barrel plus the price of the tank, which latter is about 15,000 dollars per 55,000-barrel tank. Some producers, indeed, have run their oil into earthen tanks, where a great deal becomes lost through evaporation and absorption by the soil, and altogether there has been much grumbling on account of the lack of adequate transportation facilities. There is no doubt, however, that the producers overlooked the fact that the pipe lines are commercial enterprises which are expected to pay a return upon the capital invested in them, and there is likewise no doubt that people have been very unreasonable in their claims. They not only demanded that the Government should compel the pipe line companies to lay more lines, but also that the lines built with the capital of the pipe line companies should be for the benefit of private producers altogether, and be forced to assume the rôle of public carriers.

To this the pipe lines objected, and they bestirred themselves to bring the producers to book. They not only ceased buying oil lands, but one or two of them

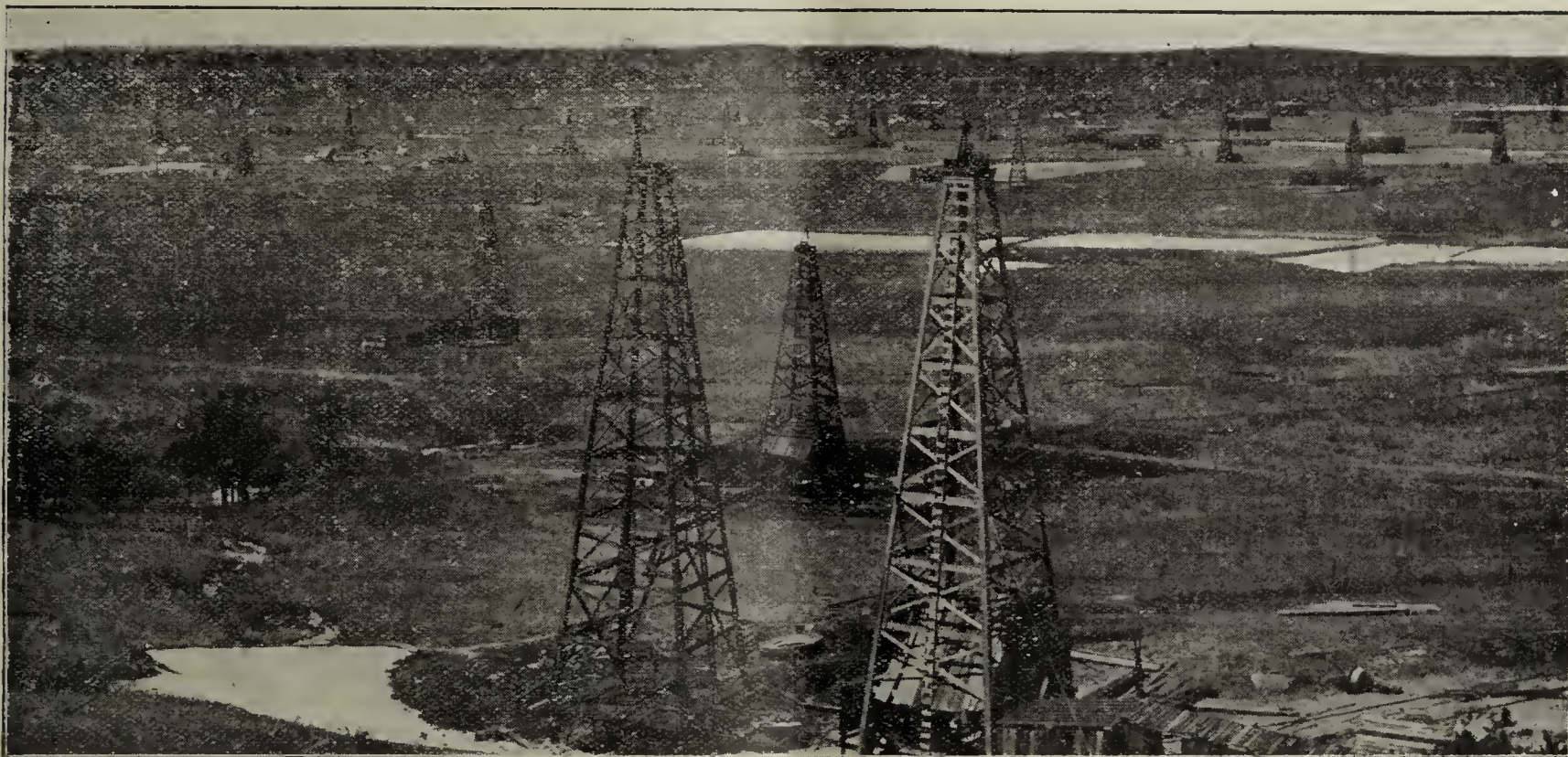
also decided to run no more oil from the Glenn pool than they could help, and they did not seem at all anxious to buy crude oil. Of course, there are certain interests which always manage to sell their oil, owing to their excellent connections with pipe line people; but many producers positively could not sell their production, and were compelled to store. Now, the financial crises prevented most people from obtaining the credit necessary to build expensive tanks; and these circumstances, together with an educational campaign on the part of the pipe lines, caused a gradual change in opinion. To cut a long story short, this change found expression about a month ago in the decision of the Secretary of the Interior in Washington, after protracted negotiations, to make things easier for the pipe lines. Guided by the oil producers, the Secretary had at first refused to give a concession for a new pipe line to the Standard Oil, except on condition that this pipe line should be a public carrier; but, in April last, being urged by deputations from oil producers, he gave the required concession without any restrictions, though it is semi-officially stated that there is an "honourable understanding" between the Government and the pipe lines, that the latter shall raise the price 20 cents per barrel when their new pipe line is in. Whether agreed upon or not, a rise in price will be the natural result of increasing pipe line facilities.

It is this prospect of higher prices which has been a potent cause of smaller production; whoever did not need the money did not produce more oil than he could help. For it stands to reason that no one will now produce oil for which he will only receive about 41 cents, if, by postponing production for six months, he can make 61 cents.

Then there has been another cause working for lower prices. The wells of the Glenn pool are now emerging from their first state, and are entering upon their real career as steady producers. The days of the head of production are past. The Glenn pool will henceforth have a normal production, mostly of seasoned wells, augmented from time to time by the rush from new wells; there is still space for presumably another 2,000 wells, and each of these will, when new, repeat the history of the old ones, and commence with a production of anywhere between 500 and 2,500 barrels a day.

After a while the production goes down with the gas pressure, and the wells become dirty on account of the heavier constituents and the dirt clinging to their walls; it is necessary to clean the wells and to shoot them. Cleaning and shooting costs something like \$1,000 per well; and therefore even a small property requires quite a nice little sum of money to be put into shape. But during the recent financial crises no money was to be had, not even in small sums; and this, as well as the prospects of higher prices later on, caused the cleaning to be postponed in many cases. In this we have an additional explanation for the falling off in production. With normal money conditions and higher prices, it would have been quite easy to keep up the production

／ PANORAMIC VIEW OF THE FAMOUS GLENN POOL. ／



by means of new wells; but both those financially strong and those financially weak had, as we have seen, very good reasons for not forcing matters at present. Moreover, those financially weak have in the past produced all the oil they could in the minimum of time, and at the present moment all the best and least drilled portions of the field are practically in the hands of the strong interests, who will be able to work them economically—that is to say, in such a way that the production is kept within the limits compatible with better prices for the oil. By this time the pipe line interests have gradually acquired a great acreage in the Pool, whilst the balance also belongs largely to wealthy capitalists.

From these particulars it seems comparatively easy to forecast the future of the Glenn pool. There are now some 1,200 wells with the head of production taken off, and a good many of them cleaned and shot, and the remainder to be cleaned and shot within the near future. The general experience is that after the shooting the production rises considerably for a few days, 1,000 or 1,500-barrels a well being not uncommon; but after that the wells begin to flow less vigorously but more steady, and those that have been shot five or six months ago give a steady production ranging between 50 and 200 barrels a day according to locality. Whatever their production is, it will slowly decrease, but the general opinion is that these wells will go on giving oil for the next 30 or 40 years, and perhaps for much longer. It is pointed out that a great number of wells in Pennsylvania and Ohio have been running for a similar period and still give three or five barrels a day, and the formation of the Glenn pool is practically the same as that in the best parts of Pennsylvania and Ohio, only the sand is much thicker.

The assumption amongst conservative and practical oil men in the Glenn pool is that each acre of land contains altogether from 40,000 to 60,000 barrels of oil, according to the thickness of sand. The more optimistic people place it even higher than that, and it is also said that every acre in the Glenn pool will ultimately yield 100,000 to 120,000 barrels. But if we take an average of 50,000 barrels to the acre, and remember that the Glenn pool, with its five square miles, contains 16,000 acres, we arrive at the stupendous total of 800,000,000 barrels, which in course of time may be taken out of the pool; and if we put the production to date at 40,000,000 barrels, it will be seen that but a small proportion of the oil has yet been extracted. Indeed, there can be no doubt that the Glenn pool will for many years to come be an enormous producer.

This prospect of an enormous production for many years receives further support from the fact that three companies have invested \$30,000,000.00 in pipe lines, and that they are ready to build more lines now that the Secretary of the Interior has removed irksome restrictions. Surely no such huge amount of capital would be sunk in pipe lines without there being the certainty that the oil to be carried is no mere figment of the imagination.

ENGLISH PATENTS.

(Specially contributed by Messrs. EDWARD EVANS & Co. Consulting Engineers, Chartered Patent Agents, and Enrolled Patent Attorneys, of the United States, of 27, Chancery Lane, London, W.C.)

APPLICATIONS FILED IN GREAT BRITAIN.

Improvements in and relating to Oils.—(William Nelson Blakeman, Jun., United States.)—William Edward Lake, 7, Southampton Buildings, London. No. 7103 of 1908.

Improvements in and relating to Oils.—(William Nelson Blakeman, Jun., United States.)—William Edward Lake, 7, Southampton Buildings, London. No. 7110 of 1908.

Rock Drill Feeding Mechanism.—Daniel Shaw Waugh, 40, Chancery Lane, London. No. 9219 of 1908.

Improvements in Dust Collectors for Rock Drills.—Gustave Jacques, 6, Lord Street, Liverpool. No. 9781 of 1908.

APPLICATIONS PUBLISHED IN GREAT BRITAIN.

Process for the Treatment of Benzines and Mineral Essential Oils and Products obtained thereby.—Attilio Fama, of Saxon, Canton Valais, Switzerland. No. 8486 of 1907.

This relates to a method for the purification of benzine or mineral oils. Mineral oils of a specific gravity of from 0.700 to 0.750 purified by the use of acids and alkalies are unsuitable for satisfactory application to the production of motive power intended for the ordinary automobile and industrial motors specially designed for the use of lighter oils of a density of from 0.670 to 0.690. Such heavy oils rapidly clog the carburettor, and furthermore the tension of the vapour is insufficient for rapid action. It is therefore been thought advisable to obviate these drawbacks—i.e., to eliminate the above impurities, and thereby increase the tension by an appropriate treatment. Such a treatment is based on the general principles of oxidation of oils by ozone. Any of the more powerful oxidising agents, such as bichromate of potassium, permanganate of potassium, di-oxide of barium, chloric acid, and derivatives therefrom, chlorates and perchlorates are used for the purpose of oxidation. These different oxidisers, mixed with a certain quantity of sulphuric acid, all give off a certain quantity of ozone. By the introduction of these oxidising agents into the benzine, a mixture is obtained which is suitable for a satisfactory oxidation in a cold state by means of known emulsifying apparatus. It is understood that the proportion of oxidisers must be proportionate to the quantity of benzine to be treated, and therefore to the size of the apparatus. After the decantation, and the subsequent separation of the product to be purified, the latter must be washed with a weak solution of ammonia in order to remove every trace of acid. After a treatment carried out as above, the products refined in this manner are pure, free from non-saturated hydrocarbons, and they have at least lost the noxious smell of these latter bodies.

Improvements in Valve Apparatus for Rock Drills, Engines and the like.—Cecil Walton, of Orchard Street, Moresby, Whitehaven, and George Henry Rayner, of 24, Edgehill Road, Sheffield. No. 26246 of 1907.

This relates to valves for rock drills, direct acting engines, and other apparatus, in which a piston is reciprocated by air or steam pressure, and more particularly to that type of valve apparatus described in prior specification No. 1933 of 1907, in which a definite quantity of the motive fluid at full pressure is measured before being allowed to enter the main cylinder and drive the main piston by expansive force, and according to the invention the motive fluid is transferred from the measuring chamber to the main cylinder without appreciable loss of pressure, so that the motive fluid is used during the first part of the stroke at high pressure expansion, commencing only when the whole of the motive fluid has been transferred from the measuring chamber to the main cylinder. The valve chest is formed with a chamber which is provided with a piston, normally located at one or other end of said chamber, leaving a space which determines by its capacity the amount of motive fluid to be used at each stroke, said piston being acted upon by the incoming high pressure fluid to expel the charge from the chamber to the main cylinder, and maintain said charge at practically full pressure until the charge is so expelled, ports, passages and the like connecting said cylinder with the supply inlet and main cylinder, and a suitable valve controlling the supply and exhaust of motive fluid to and from said cylinder.

THE MINER FIELD OF CALIFORNIA.

THE LATEST GOVERNMENT REPORT.

The United States Geological Survey is about to publish a report upon the so-called Miner ranch oil field in Contra Costa county, California, of which an examination was recently made by Mr. Ralph Arnold.

The writer points out that the Miner ranch oil field is located on Lauterwasser Creek, one of the branches of San Pablo Creek, near De Laveaga, Contra Costa county, Cal. It is about eight miles north-northeast of Oakland and is reached by road from that city and also from the several towns south of San Pablo Bay and west of Mount Diablo. The topography in the vicinity is characterised by moderately steep-sided canyons and rounded hills, some of which attain an elevation of over 1,500 feet above the adjacent valleys. The elevation at the wells, which are in the hills immediately south of Lauterwasser Creek, is between 500 and 700 feet above sea level.

Contra Costa county was one of the first counties in California in which petroleum was discovered, its presence being known as far back as 1864, when prospect wells were drilled one and a-half miles south of the Empire coal mine. The following is a summary of the attempted petroleum developments in the country to date:—

1864.—J. W. Cruikshank, about one and a-half miles south of the Empire coal mine. Several experimental wells, one 300 feet deep; green oil of high specific gravity; pumped about 15 barrels.

1865.—Adams Petroleum Co. on Coates estate, south of Empire coal mine. Several shallow wells, from which some oil was obtained.

1889.—Chandler well, on Miner ranch, south bank of Lauterwasser Creek. One well, 200 feet deep, yielded small quantity of heavy oil and water.

1895.—Cumming well, on Miner ranch, one-fourth mile east of Chandler well. Penetrates 20 feet of petroliferous shale and then 280 feet of sandstone; yielded traces of petroleum.

1896.—Sonntag well, on Allen ranch, one-half mile east of the Cumming well, 100 feet deep, in light-coloured sandstone.

1899.—J. W. Laymance, on Old Tar ranch, two miles east of San Pablo, 170-foot well, encountered seepages of oil.

1900.—Mount Diablo Oil Co., on Old Tar ranch. Several wells drilled many years ago; drilling operations begun again in 1900, but failed to get oil.

Contra Costa Oil and Petroleum Co., on Coates estate, one and a-half miles south of Empire coal mile. One or more wells.

Grand Pacific Oil Co., on Hodges ranch, one mile east of Lafayette. One or more wells.

Tide Water Oil Development Co., Coates estate, one mile south of the well site of the Contra Costa Oil and Petroleum Co.; ceased operations in 1904.

Sobrante Oil and Investment Co., on Castro tract, a

little over three miles north-easterly from San Pablo. One or more wells, but no production; abandoned.

San Pablo Oil Co., on Mulford ranch, one mile north-east of San Pablo.

American Oil and Refinery Co., "one well 670 feet deep; traces of oil and considerable gas; now abandoned.

Point Richmond Oil Co., on Mulford ranch, three miles north-east of San Pablo. Two 100-foot wells, drilled near seepage, but got no production.

Flood ranch, one and one-half miles south of Miner ranch. Old well with traces of oil on water.

National Paraffin Co., one and one-quarter miles northeast of Lafayette. One well, 1,694 feet deep; no production.

Near the corner of sections 9, 10, 15 and 16, 1 N., R. 1 E., Mount Diablo meridian. An old well is said to have shewn traces of oil.

The principal structural feature in the region of the Miner ranch is a south-eastward-plunging anticline which crosses Lauterwasser Creek just east of the ranch house. Along the axis of this fold the following formations are exposed in order, beginning a mile or so north-west of the field and extending to its south-east edge:—Tejon (Eocene) sandstone; 200 feet of brown sandstone, possibly Vaqueros (lower Miocene); 800 feet Monterey (middle Miocene), 300 feet of shale and 500 feet sandstone, in which are intercalated minor quantities of soft shale; and, finally, the feebly coherent fresh-water conglomerates, sandstones, and shales of the Orindan (Pliocene) formation of Lawson and Palache. The petroleum deposits are in the shales and sandstones of the Miocene.

The sandstones below and above the Monterey shale are practically alike, being brown to grey in colour, medium grained and largely quartzitic. The upper sandstone is locally fossiliferous, although the state of preservation of the fossils usually precludes anything but a rough identification.

The Monterey shale is fairly hard and is dark coloured in fresh exposures, but weathers to a much lighter colour. It contains many of the yellow and grey calcerous concretions so characteristic of the Monterey at most places in the Coast Range. The shale is largely organic in origin, foraminifers and diatoms being found in it abundantly. The organic remains in the shale are believed to be the source of the oil. The shale is considerably contorted, especially near the axis of the fold, dips of 42 deg. S. 86 deg. E. and 40 deg. S. 70 deg. E. being recorded within a short distance of each other in the bed of Lauterwasser Creek, north-east of the Miner ranch house. At the same locality the shale is exceedingly petroliferous, yielding a very prominent scum of light oil when the rock in the stream bed is disturbed with a pick. The dips in the overlying sandstone are not as easily obtainable as those in the shale, but it is thought that the dip on the north-east

flank of the fold grows gradually less toward the north-east.

Eight wells have been drilled in the Miner ranch field, none of which have so far been successful. They range in depth from about 570 feet to more than 2,750 feet. All lie on the north-east flank of the Miner ranch anticline, and all start in the sandstone above the Monterey shale, penetrating at first the upper sands and intercalated soft shales, and the deeper ones eventually reaching the Monterey shale. All the wells have shewn more or less gas; in fact, the abundance of the gas is one of the characteristics of this field. It is said that the gas pressure was responsible for the collapse of the casing in at least two of the wells. One well is said to have encountered a pocket of oil at a depth of about 1,300 feet, which flowed 300 barrels of oil in nine hours. This is the only well the field has actually produced with the exception of the flood well, one and a-half miles to the south, which is reported as having yielded five barrels of 29 degrees oil. The oil and gas apparently occur in pockets or lenses, and no well-defined oil sand or petroliferous zone has yet been proved to be present.

The most interesting item in connection with the oil from the Miner ranch field is its relatively light gravity, said to be about 29 degrees, as compared with the oils from the other fields in the State. As none of the wells were producing oil at the time of the writer's visit, it has been impossible to get samples of the oil for analysis in time to be included in this report. The gas from the Miner ranch field is noteworthy because of its relatively

high marsh-gas content, as compared with many of the gases from the Eastern fields, especially those of Kansas.

The Miner ranch oil field seems to have been pretty well prospected with the drill, and as no productive wells have so far been brought in and no well-defined oil sands or oil zones discovered, it appears reasonable to suppose that future development will fail to disclose any important deposits of oil. There is no question that considerable quantities of oil are present in the Monterey shale and adjacent beds, not only here but in other parts of the county, as is clearly indicated by the prospect holes and surface evidence; but there are also many reasons for believing that this oil is so uniformly disseminated in the shales and sands, with the possible exception of local and relatively unimportant pockets, as to preclude its withdrawal in commercial quantities through wells. The development of gas in the territory is another matter, but as the oil and gas have the same origin and are influenced similarly by the same conditions, it is believed that no large bodies of gas are contained in the formations of the region. Another item that must be considered in drawing conclusions concerning the future of this field is that the organic Monterey shale, which is believed to be the source of both the oil and gas, is here but about 300 feet thick an amount entirely inadequate under the most favourable conditions for supplying large quantities of hydrocarbons. The structural conditions, on the other hand, are in general favourable for the accumulation of the oil and gas were they present in sufficient quantities to pay for exploitation.

PETROLEUM IMPORTS INTO THE UNITED KINGDOM DURING APRIL.

THE SHIPMENTS INTO VARIOUS PORTS.

The imports of petroleum and its allied products into the various ports of the United Kingdom during April are given in detail in the following table. In all, the trade for the month amounted to 26,623,928 gallons, as compared with an importation of 23,150,070 gallons for March, 19,748,110 gallons for February, and approximately 30,000,000 gallons for the first month of the

year. The imports of illuminating oil form considerably over one-half of the total, and are, with the exception of the figures for January, the largest so far for the year. There was double the quantity of illuminating oil imported during April than was the case during March. The details are:—

PORT.	Lubricating.	Illuminating.	Residuals.	Benzine.	Other Products	Fuel.	Gas.
Aberdeen	290	1,200	—	—	—	—	—
Barrow	—	—	—	1,067,820	—	—	—
Belfast	2,320	—	—	—	—	—	—
Bristol	173,950	3,430,050	—	—	19,520	—	—
Cardiff	11,390	—	—	—	—	—	—
Dublin	—	613,440	—	—	—	—	—
Dundee	10,400	—	—	—	—	—	—
Glasgow	257,820	—	2,740	—	23,160	—	—
Grangemouth	20,860	17,880	—	—	—	—	—
Grimsby	2,966	—	—	—	—	—	—
Harwich	1,030	—	—	—	—	—	—
Hull	365,380	471,000	—	—	—	—	—
Leith	40,870	15,310	—	—	—	—	—
Lerwick	—	340	—	—	—	—	—
Liverpool	1,050,455	585,600	68,000	—	10,210	—	397,090
London	1,043,067	8,535,660	4,000	1,502,730	—	—	2,943,910
Manchester	805,280	1,738,330	—	—	3,270	—	976,500
Middlesboro'	2,000	—	—	—	—	—	—
Newcastle	7,230	—	—	—	—	—	—
Newport	9,070	—	—	—	10,000	—	—
Plymouth	900	—	—	—	—	—	—
Southampton	—	—	—	—	—	40	—
South Shields	—	373,600	—	—	—	—	—
Swansea	3,770	—	—	—	3,480	—	—
Totals	3,809,048	15,782,410	74,740	2,570,550	69,640	40	4,317,500

NOTES FROM ALL QUARTERS.

ROUMANIA.

At Pitzgaia.—The eruptive well of the Steaua Romana, at Pitzgaia, has ceased flowing, having been corked up with sand.

Success at Apostalache.—A borehole, owned by Mr. Vassiliu at Apostalache, has become eruptive with a daily yield of 40 tons.

The Isbanda Well of Messrs. Ganz and Co. at Baicoi, situated to the south of the productive wells of the Steaua Romana and Regatul Roman, is producing between 15 and 20 tons daily, from a depth of 254 metres. The oil has a gravity of 0.880 to 0.890.

Production.—The crude oil production in Roumania is stationary, and a shortage of oil is felt on the Roumanian market and prices are rising. Exports are proceeding actively, and during the first quarter of 1908 they totalled 102,430 tons against 74,937 tons in the corresponding quarter of 1907.

The Nafta Co. during the year ended 31st December, 1907, earned a net profit of 169,921 francs. The company's properties and installations are valued in the balance sheet at 1,284,624 francs, and there is cash at banks 320,851 francs. The share capital is 1,600,000 francs, and the creditors figure for 157,908.

Spouter at Calinet.—Well No. 2 of the Concordia Co. (formerly Telega Oil Co.), at Calinet, has been spouting for several days, beginning from the 4th inst., and threw out large quantities of oil and sand. All excavations in the vicinity have been filled with oil, and the peasants have taken away between 300 and 400 tons. The oil is of a light gravity.

The Aquila Franco-Romana.—The accounts of the Aquila Franco-Romana for the twelve months ended 31st March, 1908, shew a net profit of 361,398 francs. The assets of the company are: refinery, wells and installations, 4,194,047 francs; goods and materials, 3,476,485 francs; cash and debtors, 1,082,520 francs. The share capital is 6,000,000 francs, and creditors 3,157,339 francs.

The Petroleum Association.—A meeting of the Roumanian Petroleum Association was held at Bucarest on the 2nd inst., Mr. Alimanestianu being in the chair. An executive committee of three members was elected to manage the affairs of the association, with the president. These members are:—Mr. Saladin, of the Aquila Franco-Romana Co.; Mr. Hertzog, of the Trajan Co.; and Mr. Gheorghiu.

The Moreni Company.—The Moreni-Filipești Co., Mr. Lewis Hamilton, and Messrs. Loewenbach and Co. have agreed to jointly create a company for taking over and working the properties which these firms possess at Moreni, with all installations. These firms are proportionately providing the working capital required for developing these properties. The company will be called the Moreni Co., and will have a nominal capital of 1,000,000 francs, of which 850,000 francs represents the valuation of the properties, and 150,000 francs is to be the working capital. The condition of the wells at Bana-Moreni is as follows:—Mr. Hamilton's well is now 820 metres deep, with good indications; the two boreholes of Loewenbach and Co. and of the Moreni-Filipești Co. are 615 metres and 450 metres deep respectively.

AMERICA.

The Security Oil Company.—The Security Oil Co. has recently purchased additional vessels for its coastal trade, and it is rumoured that other tankers are to be put into active service as soon as possible.

The Texas Company's New Steamer.—One of the largest oil tankers built in America has been launched by the Texas Co.—the "Texas"—and this will be put into service between the company's refinery at Port Arthur and foreign ports.

Reduction of Capital.—At the annual meeting of the stockholders in the Higgins Oil and Fuel Co., held at Beaumont, it was agreed to reduce the capital of the company by one-half, the original capital being \$2,500,000. The main reasons for the reduction are that the lands and equipment of the company have deteriorated, and by such a reduction of capital a substantial saving will be brought about in the franchise tax assessed against the company.

Saratoga.—The Saratoga district continues to hold its own in the matter of good producing wells. During April ten wells were completed, each being a producer with an average daily output of 180 barrels. The deepening of the old wells is proceeding very satisfactorily, the results being encouraging.

From Louisiana.—Each of the producing districts in Louisiana is increasing its output, and the April figures shew an average of over 22,000 barrels daily, as compared with 20,000 barrels for the March average. There is now considerable activity at Jennings and in the Caddo, Welsh and Anse la Butte districts.

In the Santa Maria Field.—The water difficulty in the Santa Maria field is becoming less troublesome on account of the success which is attending the recent efforts to cement the wells. The *Californian Derrick* states that now there is every prospect that the problem will be entirely solved in the near future.

South-east Texas Production.—The production of the fields in South-east Texas on the last day of April was approximately 31,000 barrels, as compared with a total of 33,700 barrels for the corresponding day a month earlier. The only district that shewed a slight increase in its production was the famous field of Batson Prairie.

The Kern River Field.—The present high price of oil has stimulated operations in the Kern River field, and it is said that drilling is now proceeding with more energy than at any time since the boom days of seven years ago. Every company in the field is drilling new wells. The daily production, however, remains stationary at about 27,000 barrels.

The Californian Derrick.—The second issue of this new enterprising oil journal for the Pacific coast has reached us, and is full of interesting matter. Those who desire to retain full records of everything of interest in the Californian fields will do well to get in communication with the Editor—Mr. E. S. Eastman, Metropolis Bank Buildings, San Francisco.

RUSSIA.

Grosny Producers' Conference.—On May 16th there was opened at Grosny the twelfth conference of the local petroleum producers.

The Rilsky Refinery at Baku, which was transformed in 1907 from a kerosene refinery into a combined kerosene and lubricating oil refinery, commenced delivering oils in the middle of April.

Renewed Activity of a Bebe-Aibat Spouter.—Nobel's well No. 25, on plot No. 27 at Bebe-Aibat, which gave a powerful spouter in January, was active in the middle of April, although with less force, and yielded several hundred thousand poods:

Fire on the Volga.—According to a telegraphic report from Nijni-Novgorod, a fire which broke out on Assadulaeff's floating pumping station, spread to two tank barges, and the liquid fuel storage installation of the Mazout Co. The total loss is estimated at 500,000 roubles.

Novorossisk Shipments.—The shipments of petroleum products from Novorossisk in February amounted to 331,426 poods, made up as follows:—Kerosene, 3,309 poods; residuals, 327,716 poods; benzine, 318 poods; goodron, 83 poods; other products, 401 poods. The total shipments for the first two months of 1908 amounted to 678,239 poods, against 1,808,812 poods in the corresponding period of 1907.

Grosny Benzine Freights.—The following rates come into force in August next for the transport of benzine from Grosny to Novorossisk for export by the Vladicaucasian railway: for benzine with a gravity not exceeding 0.714 in tank cars of the railway, 18.30 copecs per pood; and in exporters own cars, 16.78 copecs. For benzine with a gravity between 0.715 and 0.765 the rates will be 16.30 and 14.78 copecs per pood respectively.

Interior Shipments.—Out of the total quantity of 17,450,000 poods of oils, which shipowners are to carry for Messrs. Nobel Bros. this year's navigation to the Volga ports, 1,200,000 poods is destined for Samara, the freight from Astrakhan to Samara is 3.08 copecs per pood. The "Kavkaz and Merkuri," "Samoliot," "Nadezhda," "Eastern," and "Volga (1843)" steamship companies have agreed among themselves to regulate freights and share the carrying trade.

LATEST QUOTATIONS OF PETROLEUM SHARES.

ENGLISH COMPANIES.

This list is restricted to companies who have paid dividends or who are producers.

Company.	Capital Paid Up.	Value of Shares.	Latest Prices.
Assam Oil	£205,000	£1	16-16
Baku Russian Petroleum ..	£750,000 Ord.	£1	1/0-1/6
Bibi-Eybat Petroleum Co. ..	£650,000 5½% Pref	£1	2/0-3/0
Californian Oilfields ..	£385,000 Ord.	£1	6/6-7/6
Commonwealth Oil Co. Pref	18/- paid up (Prem.)	£1	5½-5¾xd
Def..	£1 fully paid		1-1½
European Petroleum..	£550,000 Pref.	£1	1½-1½
" " ..	£550,000 Ord.	£1	1/0-2/0
" " ..	£376,000 Deb.	£100	0/6-1/6
Russian Pet. & Liquid Fuel ..	£500,000 6½% Pref.	£1	68-72
Schibaieff Petroleum ..	£600,000 Ord.	£1	2/6-3/6
Shell Transport & Trading ..	£575,000 6% Pref.	£1	2/0-3/0
Spies Petroleum Company ..	£575,000 Or.l.	£1	¾-1
	£2,000,000	£1	1/6-2/6
	£1,000,000 Pref.	£1	44/0-45/0
	£312,500	£10	10-10½
		10s.	8/6-9/6

RUSSIAN COMPANIES.

Company	Nom. Value in Roubles.	Quotations on May. 19th.	
		Lowest Roubles.	Highest Roubles.
Baku Naphtha Co.	100	413	416
Balakhany Naphtha Co. ..	250	—	—
Caspian Society	1,000	4,000	4,050
Mazout Co.	250	—	—
Melikoff, A. C.	250	—	—
Mirzoeff Bros.	250	—	—
Naftalan Co.	250	—	—
Naphtha Co. "Kavkas" ..	250	—	—
Naphtha Trading Co., A. I. Manta-	250	153	155
cheff & Co.	250	—	—
Neft Co.	250	—	—
Nobel Bros.	5,000	11,350	11,450
" "	250	—	—
Rops and Co. V.. .. .	250	—	—
Russian Naphtha Co. ..	250	—	—
Society Mazout	250	—	—
Ter-Akopoff Co.	250	—	—
Tumaeff & Co., J. G. ..	250	—	—
Volga-Caspian Naphtha and Trading Co	250	—	—
" " " (Second Issue)	250	—	—

SCOTCH COMPANIES

Supplied by Messrs. MACLEAN AND HENDERSON, STIRLING.

Company.	Capital Paid Up.	Value of Share.	Latest Prices.
Broxburn Oil Co., Ltd., Ord. 17/- pd	£235,000	£1	£2 2s. 3d.
Do. 6% Cum. Pref. ..	£100,000	£10	£12 7s. 6d.
Burmah Oil, Ord.	£1,100,000	£1	£3 15s. 6d.
Do. Pref.	£250,000	£1	£1 7s. od.
Dalmeny Oil Co., Ord. (7 paid) ..	£37,800	£8 10s	£5 10s. od.
Do. 5% Pref.	£18,900	£7	£4 13s. od.
Oakbank Oil Co., Ltd., Ord.	£170,000	£1	£1 13s. 3d.
(17s. paid)			
Pumpherton Min. Oil Co., Ltd., Ord.	£110,500	17s.	£12 os. od.
(17s. paid)			
Do. 6% Cum. Pref.	£100,000	£10	£13 5s. od.
Tarbrax Oil Co., Ltd. Ord. (£1 pd.)	£38,350	£1	£2 17s. 6d.
Do. 6% Cum. Pref.	£35,000	£1	£1 3s. od.
Young's Paraffin Co., Ltd., Ord. ..	£452,808	£4	£3 15s. 6d.
Do. "B" Deb. ..	£150,000	£100	£185 os. od.

DUTCH COMPANIES.

Company.	Latest Quotations per cent.)	Florins
Arnhemsche Petroleum Mij.	31	1,000
Aurora " (Deb. 5%)	82½	—
Campina Poiana Mij.	—	—
Dordtsche Petroleum Mij. (Pref.) ..	137½	50
" " (Deb. 4½%)	101½	1,000
Gaboës " "	—	—
Holl. Rumeensche Petroleum Mij. ..	13½	1,000
Int. Rum. Pet. Mij.	28½	500
Java Petroleum Mij. (Ord.)	—	1,000
" " (Pref.)	23½	—
Koninklyke Nederl. Pet. Mij. Shares ..	282½	250-1,000
" " Share certificates	279½	1,000
Mœara Enim Petroleum Mij.	140½	100
" " 1-1,000 Oblig. 5	—	250-1,000
" Moesi Ilir " Petroleum Mij. ..	—	—
Nederl.-Rumeensche Petroleum Mij. ..	3½	—
Nieuwe Ned. Petroleum Mij. And. ..	—	1,000
Oliebronnen in Hannover Mij.	—	—
" " (Deb. 5%)	—	—
Panolan Maatschappij Cert.	224	—
Perlak Petrol. Mij. (6% cum. pr. A.) ..	112½	1,000
" " (Common)	—	—
Sumatra-Palembang Petroleum Mij ..	97	500
Tarakan Petrol Mij.	32	—
Zuid Perlak Petrol. Mij. (Pref.) ..	87	—

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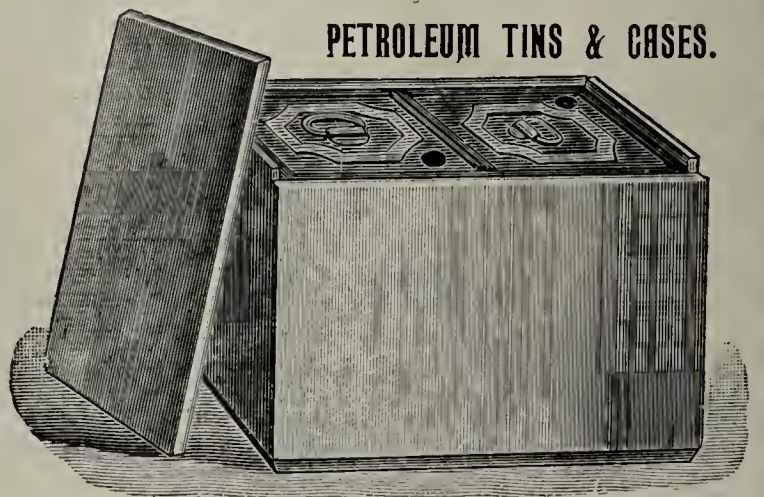
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**THE
PETROLEUM REVIEW,**

45, St. Mary Axe, LONDON, E.C.

American Office: 150, Nassau Street, New York.

SATURDAY, MAY 23, 1908.

**THE LESSON OF THE SCOTCH OIL
COMPANIES.**

THE highly satisfactory reports which continue to reach us regarding the operations of the various shale oil companies in Scotland, carry with them a lesson that would be well if taken to heart by those who are responsible for the management of English oil enterprises both in Russia and elsewhere.

From year to year, with a regularity which is very

commendable, the reports of the several companies engaged in the Scotch oil industry unmistakably point, through all their successes, to the exercise of a guiding hand of diligence and care, which is conspicuous only by its absence in other petroleum enterprises. There are many, we doubt not, who will argue in the face of what has been accomplished in the direction of success on the one hand, combined with almost continuous failure upon the other, that the oil companies operating in the Scotch shale fields, have all along been singularly blest, and that it is the result of the "strange blessings of fortune" that such substantial dividends are forthcoming every twelve months. But if we carefully weigh facts, conclusions must point otherwise.

It cannot for a moment be seriously put forward that shale mining and the conversion of the shale into oil products offers a more remunerative investment than should boring for petroleum in territory proven to be petroliferous, though we admit the average results, so far as the English investor is able to judge, have been such as would almost justify the holding of this opinion. In the case of the Scotch oil shale mines, it is a well-known fact that a yield of sixty gallons of crude oil from the refining of a ton of oil shale brings very substantial profits. In the case of our oil companies, however, who, in the various oil fields produce crude oil from the bore-hole, all the great expense of "pounding" shale, in order to obtain the crude material from which the valuable refined products are derived, is absent, and thus a very great advantage is obtained over the shale oil companies—an advantage which never can be theirs. And yet how dissimilar are the financial results of the two classes of oil undertakings. In the one case, the shale oil companies march forward from success to success each year, and while regretting that things are not better, come forward with most substantial dividends, but with the the unlucky petroleum companies, the only consolation which the investor receives, in the vast majority of cases, is a never-ending reiteration from those in charge of the undertaking that, owing either to this, that, or the other thing, it has been impossible to declare a dividend; in fact, one has not been earned. This sorry tale comes with regular yearly monotony, until the disappointed shareholder looks longingly to the fate of his lucky brother investor in the Scotch shale oil business, and mutters a sentence beginning—"If I had only—."

Let us look, first of all, at a few of the returns which the Scotch oil companies are about to make to their shareholders of ordinary stock. The dividends just declared in this direction are as under:—

	Per cent.
Pumphreston Oil Co.	50
Broxburn Oil Co.	17½
Oakbank Oil Co.	15
Tarbrax Oil Co.	15

while in each case an allowance has been made for depreciation and a setting aside to the reserve fund, which is really in excess of actual requirements. And all this has been accomplished during a period which was far from one of the best for the operating companies. In fact, had the several oil companies in Scotland come forward this year with no dividend at all,

they would have had a stronger case to put before the shareholders than the directorates of any Anglo-Russian oil companies ever had.

Misfortunes have not come singly during the past year to the Scotch shale oil companies. Like their brothers in the oil fields of Russia, the workmen have gently but firmly insisted upon increases in wages, and in the twelve months just closed, no less than five different advances have been paid. Then in regard to legislation, this has affected them adversely, and very seriously, especially in the case of the Workmen's Compensation Act, and if the Miners' Eight Hours Bill now before Parliament becomes law, the effect upon the companies' mining costs will be directly felt, for the cost of coal, of which all concerns are large consumers, will be considerably increased. Then again, the market conditions for the past twelve months have by no means been over-favourable, for in one direction it is an open secret that American competition has cut the ground from under the Scotch shale companies' feet upon the Continent, where large quantities of various products have in the past been marketed. All these events have tended to minimise the successful working of the Scotch shale oil concerns, and yet they are able to achieve such eminently satisfactory results as are recorded above.

Under such circumstances, it is doubly gratifying to find that those responsible for the management of the respective concerns have found it possible to put before the shareholders a statement shewing such substantial profits after ample provision has been made for depreciation in every department. What the directors of our petroleum companies would have done had they been faced with, and had to pass through such troublous times, precedent offers the answer. They would have muddled through it with many grumblings, and hid their own shortcomings under the unfortunate events that occurred. They have done this in the past, and the chances are they may do it in the future.

To us, it is a great pity that the destinies of our English-managed petroleum-producing concerns should be in the hands of so many gentlemen who over and over again have proved their unworthiness of any confidence. To-day more than at any other time in history, really sound petroleum investment is capable of yielding a return second to that of no other class of company, and had not there come into our midst a set of men who at first determined that come what may, they would adopt the get-rich-quick policy, public confidence in petroleum enterprises would have still been of the highest. Here it is that our Scotch companies teach their lesson. They are controlled by men of vast experience who have a real cash interest in the concern, and who, satisfied with a fair return for their labours upon the directorate, concentrate heart and soul upon the intricacies of the shale oil business and conduct it in a way which has long ago won the admiration of all. Their example is a worthy one; let it be followed, and then we shall soon see our English companies in the great petroleum producing fields gaining for themselves a worthy name, and returning to investors dividends which they have a right to expect.

THE USE OF ENGLISH MANUFACTURED GOODS IN BAKU.

In a brief report upon the Baku petroleum industry, the British Vice-Consul deals with a phase which should command the undivided attention of English manufacturers. He says that there is always a demand for oil motors for driving machinery of all kinds in the outlying districts, but the demand during 1907 for all classes of machinery was very brisk at the oil fields, and imports of British material for the year compare favourably with those of the last few years. Until quite recently nearly all electrical appliances were supplied by Germany, but in 1907 several British firms entered the market with fair success. Electrical power has been considerably used on the oil fields, its great advantage being economy of space. Lately, however, a rival to electrical motors has appeared in the form of natural-gas motors, placed on the market by Messrs. Tangyes, Ltd., of Birmingham. By means of a conduit pipe the gas issuing from the well is collected and used as fuel for the motor. In view of the great depths to which wells at Baku have at present to be carried, and the trouble consequently experienced in shutting out the waters met with in the upper strata, steel casing for lining wells is in considerable demand. The usual form of casing employed is iron-riveted casing, backed with cement to prevent water from getting through and flooding the well. In steel casing, however, the lengths screw into one another, and the process of shutting out water is thereby greatly facilitated.

THE PETROLEUM SITUATION IN CALIFORNIA.

Throughout California, matters in connection with the petroleum industry are highly satisfactory. Prices, on the whole, are being well maintained, and new developments are being pushed forward in all fields as rapidly as possible. Production is steadily increasing, but so far, very few of the efforts to extend the producing area in the respective fields, have been successful. The Coalinga field is one of the chief centres of activity, though much difficulty has recently been experienced in getting material on the ground. The daily production is nearly 30,000 barrels, none of which is going into storage. The Kern River field is running Coalinga very close, for its

output day by day is quite 28,000 barrels, while the production of the Santa Maria field is scarcely more than a thousand barrels short of this daily figure. The Los Angeles field is claiming great attention, and during the past month (writes our own correspondent) the daily production has increased by a thousand barrels. The Union Oil Co. has recently brought in a well doing over 1,000 barrels daily. This company is looking with a very favourable eye upon the Los Angeles field, and it is said it intends to export the production as soon as circumstances warrant.

THE PRAIRIE OIL AND GAS COMPANY.

FACTS WORTH STUDYING.

Our contemporary, the *Oil City Derrick*, quotes the following statistics as a companion picture to Attorney-General West's petition to enjoin the Prairie Oil and Gas Co. from making any further investments in the State of Oklahoma. The company's report to the State Auditor is made public from Guthrie. According to the statement, the Prairie Oil and Gas Co. has property, consisting of pipe lines, pump stations, tanks, oil in storage, etc., in nine counties in Oklahoma, rendered for taxation as follows:—

Washington county	\$7,693,549.65
Tulsa county	3,488,188.74
Creek county	1,518,033.87
Osage county	725,815.91
Pawnee county	646,229.95
Nowata county	226 307.34
Okmulgee county	162,404.40
Muskogee county	109,037.20
Rogers county	96,481.74

Total \$14,666,048.53

The crude oil now stored in the iron tanks of the company, approximately 20,000,000 barrels, is listed at 38 and 41c. per barrel, the price paid the producers for it, representing an investment in oil alone, held in indefinite storage, of at least \$8,000,000. The tax levy, as per assessment rolls and the State taxation commission's final valuation, has not yet been made. In addition to the ad valorem tax, already provided for in the revenue bill now in force, the legislature is about to pass a gross receipts' tax, to be assessed against the gross business done annually by all corporations and individuals engaged in manufacturing and producing business, except agricultural, horticultural and kindred lines, patterned after the Texas law.

CLASSIFIED IMPORTS INTO UNITED KINGDOM UP TO MAY 18th, 1908.

IN GALLONS.

[ALL RIGHTS RESERVED.]

COUNTRY.	ILLUMINATING.		LUBRICATING.		RESIDUALS.		GAS OIL. (Solar)		BENZINE.		FUEL OIL.		OTHER DESCRIPTIONS.		TOTALS.	
	Since May 4.	From Jan. 1.	Since May 4.	From Jan. 1.	Since May 4.	From Jan. 1.	Since May 4.	From Jan. 1.	Since May 4.	From Jan. 1.	Since May 4.	From Jan. 1.	Since May 4.	From Jan. 1.	Since May 4.	From Jan. 1.
Austria ...	—	—	6,400	22,400	5,000	28,920	—	—	—	—	—	—	—	—	11,400	51,320
Belgium ...	—	—	42,171	297,484	—	36,000	—	—	—	40	—	—	1,440	—	42,171	334,964
Canada ...	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Dutch India ...	—	—	—	—	—	—	—	—	3,455,800	8,749,270	—	—	—	—	3,455,800	8,749,270
Germany ...	60,180	1,913,250	61,822	658,342	—	6,090	—	—	—	270	—	—	6,070	—	122,002	2,584,022
Holland ...	—	—	—	9,220	—	—	—	—	43,000	120,340	—	—	4,800	24,060	47,800	153,620
Roumania ...	905,000	4,019,700	—	—	2,240	2,240	—	4,433,150	—	2,033,900	—	—	—	—	907,240	10 488,990
Russia ...	642,060	6,727,680	5,735	1,426,355	—	68,000	—	—	1,478,700	1 478,700	—	—	—	—	2,126,495	9,700,654
U.S.A. ...	2,686,950	43,849,690	2,550,665	17,651,445	19,775	629,255	2,737,740	18,815,700	—	978,840	—	1,358,300	15,420	725,600	8,010,550	84,008 830
Other Countries	—	340	3,210	45,395	—	40	—	—	—	280	—	560	—	160	3,210	46,775
	4,294,190	56,510,660	2,670,003	20,110,641	27,015	770,545	2,737,740	23,248,850	4,977,500	13,361,640	—	1,358,860	20,220	757,330	14,726,668	116,118,445

BATOU M PETROLEUM EXPORTS DURING MARCH.

Petroleum exports from Batoum were rather slow in March, and the turnover was, therefore, smaller than in January or February, during which months four large bulk cargoes were shipped to the East. Shipments to European markets, more particularly to Germany, shewed an increase in March. The total shipments in the first three months of 1908 amounted to 10,830,000 poods of various oils. The case oil trade throughout this period was remarkably steady and regular. The shipments of this article in March amounted to 462,000 poods, whilst the average for the first three months did not exceed 500,000 poods per month. The shipments of kerosene in bulk in March were 1,687,000 poods, which were 1,000,000 poods less than in February. Lubricating and other oils remained regular throughout.

The following are the figures of the arrivals from Baku and shipments from Batoum in March, as well as the stocks at Batoum on March 31st (o.s.) :—

	Arrivals from Baku.	Shipments from Batoum.	Stocks on 31st Mar.
	Poods.	Poods.	Poods.
Refined Kerosene ..	2,176,000	2,149,000	5,152,000
Kerosene Distillate ..	—	—	101,000
Solar Oil	50,000	—	52,000
Machine Oil	381,000	684,000	856,000
Spindle Oil	75,000	168,000	88,000
Cylinder Oil	9,000	15,000	35,000
Vaseline	1,000	80,000	32,000
Lubricating Oil Distillate	74,000	—	85,000
Residuals	296,000	179,000	415,000
Other Products ..	48,000	5,000	3,000
Total ..	3,110,000	3,280,000	6,819,000

In view of the practical equilibrium between arrivals and shipments, the stocks have scarcely undergone any change. Only the stocks of machine oil, owing to a falling off in supplies from Baku, have declined by about 20 per cent. For March, we have to record a further falling off in shipments to England, which hitherto was the chief market for Russian oil. The total shipments to England in March were 355,000 poods, which included one small kerosene bulk cargo. During the first three months of 1908, the total shipments from Batoum to British ports amounted to 1,300,000 poods, or an average of 400,000 poods per month, against the 2,000,000 poods which was the normal monthly figure for exports to Great Britain in former years. The position is further aggravated by a decline in exports of kerosene also to France, where it was formerly shipped in the form of distillate at the rate of 6,000,000 to 8,000,000 poods per annum. Now, only lubricating oils are shipped to France, which for March amounted to 292,000 poods. The exports to Germany, thanks to an increased demand for kerosene, has gone up to 682,000 poods. On the other hand, the shipments to Belgium fell to 487,000 poods. To Austria, Italy and Malta there were shipped 391,000 poods; Tunis and Algeria, 147,000 poods; Alexandria, 220,000 poods (kerosene, in bulk); Turkey and Balkan States, 389,000 poods. For Russian home ports there were two bulk shipments of an aggregate of 217,000 poods, and also some small shipments in barrels.

THE TIN PLATE MARKET.

Messrs. Norton, Owen & Co., of 4, Bishopsgate Street Within, London, E.C., report under date May 21st, 1908, as follows :—

The market has been very quiet since our last report, and owing to the general falling off in the demand and to the fall in price of tin, prices of tin plates have continued to droop. However, tin has partially recovered from the set-back, and as the tin plate wages agreement has been practically settled for another year the market is now steadier, and we make prices of oil size tin plates to-day as under. The exports last month were good—the shipments to the United States being particularly heavy. We give details at foot :—

1c	18½ × 14	124 sheets	110 lbs.	12/6 per box.
1c	19½ × 14	120 "	110 "	12/6 "
1c	20 × 10	225 "	156 "	17/6 "

F.o.b. Wales. Tin lining and iron hooping extra.

EXPORTS OF TIN PLATES.

	April, 1907.	April, 1908.	Jan.-April, 1907.	Jan.-April, 1908.
	Tons.	Tons.	Tons.	Tons.
Russia	1,157	904	3,298	3,939
German /	3,598	2,622	14,015	10,061
Holland	2,256	2,601	9,449	8,443
Belgium	572	964	2,624	3,190
France	1,903	2,745	8,476	9,763
Portugal	1,231	1,229	3,103	3,735
United States ..	6,191	7,426	22,210	22,030
British East Indies	4,500	3,965	19,640	16,283
Australia	829	1,565	5,089	7,257
Canada	1,784	476	6,472	4,108
Other countries ..	11,855	11,287	42,832	47,013
Total Tons	35,876	35,784	137,208	135,822

AMERICAN PARAFFIN WAX EXPORTS DURING MARCH.

The exports of paraffin wax from America during March, together with the figures for the corresponding period of last year, are given in the following table, the figures being in pounds :—

EXPORTS DURING MARCH.

Exported to —	1907.	1908.
United Kingdom	8,731,416	10,297,212
Belgium	195,495	76,702
France	97,905	240
Germany	537,869	482,601
Italy	3,603,296	642,708
Netherlands	575,201	71,310
Other European Countries	743,941	137,646
Central American States and British Honduras	96,022	63,933
Mexico	841,955	515,959
South America	90,806	31,417
Japan	—	1,504,745
British Australasia	551,255	6,842
Other Asia and Oceanica	932,590	1,491,731
British Africa	1,078,081	1,038
All other African Countries	—	626,321
Other Countries	8,338	2,837

Prospective Developments near New Iberia.—It is reported that Captain A. F. Lucas has leased the mineral rights of the Lydia plantation, near New Iberia, Louisiana. The leased tract consists of nearly 6,000 acres, upon which drilling must be commenced within eight months. It is said that indications of successful boring in the territory are very numerous.

THE KEROSENE TRADE ON THE ROUMANIAN HOME MARKET.

PUTTING THE NEW LAW INTO FORCE.

The Roumanian refiners are now occupied with the situation created by the new law for the allotment of the home trade among the petroleum refineries. The Government are also devoting much attention to this matter, and recently the Prime Minister, Mr. D. Stourdza, and the Minister of Finance, Mr. Costinescu, met representatives of the refineries, and discussed the situation with them.

There are now two currents among the refiners. The Steaua Romana, which by the financial assistance which it has recently rendered to the Aurora Co. has drawn the latter into its sphere of influence, and with its aid intends to continue in the future to rule the home trade.

The question has now arisen as to the manner in which the trade shall be carried on, after the quantities to be contributed by each refinery have been fixed. As is well known, only the Steaua Romana and the Romano-American Co. possess storage installations and distributing organisations, and all the other refiners will have to have recourse to one of the two companies for the purpose of delivering to the trade their quota in the home consumption. The position is further complicated by the fact that the organisations of the two companies are upon a widely different basis. The Steaua Romana represents the old system, by which there exists between the refiner and the consumer two or three middlemen, each earning a profit and thereby raising the price to the consumer, whilst the Romano-American Co. represents the new system, in which all middlemen between refiner and consumer are eliminated, and the profit thus saved is divided with the consumer by selling him the oil at a cheaper price.

The working of the two systems naturally implies a difference in price.

Another question arising is that the Government fixes the maximum price of the oil ex-refinery, but has nothing to do with fixing the retail prices, which are left to the discretion of the distributors and intermediaries who may easily revert to the old state of affairs and sell the oil at 40, 45, and even 50 centimes per litre. The old system

makes possible a return to the old conditions, which are entirely precluded by the new system, as the refiner being in direct contact with the consumer the price, once fixed by the refiner, cannot undergo any change before reaching the consumer. Further action depends on the way in which these questions will be decided.

Practically all the refiners, as well as Mr. Stourdza and Mr. Costinescu, have in principle recognised as the more rational and more advantageous the new system introduced by the Romano-American Co. Both the Prime Minister and the Minister of Finance have, during the discussions which they have had with the refiners, declared that the Government will not allow any competition in the home trade, and they wish that all the refineries should come to an agreement to regulate this trade among themselves. Should the refiners fail to come to an understanding among themselves they threaten to bring into Parliament a bill for making the petroleum trade a State monopoly.

Mr. Spies has announced that the Steaua Romana, in conjunction with the Aurora Co., has created a special company for carrying on the distributing trade in Roumania, with a capital of 500,000 francs. This company will have at its disposal the distributing organisation of the Steaua Romana, and will allow it to be used by other refiners in return for a commission on sales. The question was discussed as to the method of working of the new company—i.e., with or without the aid of middlemen.

Another question under consideration is that of the method by which the proportionate participation of the various refineries is to be fixed, whether by the nominal capacity of the refinery, as declared by the owners, or according to the quantity of oil actually distilled.

A commission was nominated to examine this question and to report their conclusions to the Government. This commission consists of the following gentlemen:—Dr. Bergher (Steaua Romana), Dr. Edeleanu (Vega Co.), Dr. Aisinman, Prof. Many (Colombia Co.), Dr. Bossel (Aquila Franco-Romana), Mr. S. Parascheva and Mr. Frischhoff, refiners.

In conclusion, the Minister of Finance reminded the refiners that on no account will the Government allow the working of refineries which will not accord with the requirements of the industry or the provisions of the laws of the country, and urged the refiners to agree among themselves to eliminate competition.

PETROLEUM DISCOVERIES IN ORANGE RIVER COLONY.

Investigations relating to oil have been proceeding in the Orange River Colony ever since the war, but more particularly within the past six months. A large amount of ground has been covered, and careful investigation has resulted in the definition of a broad oil belt, which stretches across the colony, roughly from the north-east to the south-west districts of Harrismith, Bethlehem, Senekel, Ficksburg, Ladybrand, Thaba 'Nchu, Bloemfontein, Wepener, Smithfield, Edenburg, and Fauresmith. In Ladybrand district alone, five distinct basins have been located. The discoveries there embrace oil springs, oil shales, ozokerite, blue clay, coarse sandstone impregnated with oil, bituminous tufa, etc. The basins in each case are clearly defined.

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SCOTCH SHALE OIL COMPANIES.

ANNUAL MEETINGS.

OAKBANK OIL COMPANY.

The annual meeting of the shareholders of the above company was held on Wednesday at Glasgow, Mr. Robert T. Moore presiding. The annual report, which was taken as read, stated that the amount at the credit of profit and loss account, including the sum of £4,940 brought forward from the previous year, was £50,713 16s. 9d., from which fell to be deducted interest on loans £1,268 17s. 1d., leaving £49,444 19s. 8d. This sum the directors recommended should be disposed of as follows:—In payment of a dividend at the rate of 15 per cent. on the paid-up capital of the company, £25,500; in writing off depreciation on plant, £12,000; to retort renewal fund, £5,000; in reduction of price paid for Duddingston Shale Field, £2,000; leaving a balance of £4,944 19s. 8d. to be carried forward. The extra cost of fuel and wages during the past year was very heavy, but the increased price obtained for the company's product was sufficient to meet this. The company's pits at Midcalder have been working for over forty years, and the whole of the upper seams have been exhausted. The lower seams, which are of inferior quality, have been opened up, and a fair trial made to see if they could be worked at a profit. They have, however, been proved unprofitable, and it has become necessary to abandon the working. The pits would, therefore, be closed at an early date, but this would entail no capital depreciation, as their value had long since been written off. To compensate for the deficiency in the supply of crude oil to the refinery, two additional mines are being formed in a lower seam of shale in the company's leasehold at Duddingston. These mines are well advanced, and were giving a considerable output. The crude oil works at Niddry Castle were being enlarged sufficiently to deal with that additional shale, and the first section of the new retorts was now in use. As soon as the enlargement of Niddry Castle Works had been completed, it was intended to demolish the retorts at Oakbank Works; but the company has been fortunate in acquiring the leases of the proved shale fields of Westwood and Easter Breich, containing a large quantity of workable shale at no great distance from Oakbank Works. The shale from these fields would be carried by rail, and the retorting department at Oakbank Works would be continued, and a large capital depreciation avoided. The directors propose to proceed at once with the development of these shale fields. The extra quantity of crude oil to be purified entailed an extension of the refinery at Oakbank, and this extension was already partly completed. The directors were pleased to report that the site of Oakbank Works, hitherto held on mineral lease, had been acquired by purchase at the price of £15,000. The area extended to about 130 acres. At March 31st last, there was on floating loan to the company a sum of £28,472 16s., and the directors think that this should be put on a more permanent footing. To repay these loans, and to carry to completion the new work on hand and to be commenced, additional capital will be required, and the shareholders would be asked at an extraordinary general meeting, to be held immediately after the ordinary general meeting, to consider, and, if approved, to sanction an increase of the capital of the company by the creation and issue of 100,000 shares of £1 each, carrying a preferential cumulative dividend of 6 per cent.

The Chairman, in moving the adoption of the annual report, said the directors regarded the working of the company during the past year as very satisfactory. It would be seen that during the year which had passed much had been done in the way of increasing the capacity of the works and improving the company's property. But all these operations required money, and the directors had decided to raise additional capital in the form of preference shares.

Mr. Fraser seconded, and the report was adopted. Messrs. James Jones and R. T. Moore were re-elected directors, and Mr. John Wilson, C.A., was re-appointed auditor.

An extraordinary general meeting of the company was held at the close of the annual meeting—Mr. Moore presiding. On the motion of the Chairman, a resolution was passed to increase the capital of the company from £200,000 to £300,000 by the creation of 100,000 preference shares of £1 each, carrying a preferential cumulative dividend of 6 per cent.

BROXBURN OIL COMPANY.

The thirty-first annual general meeting was held on Wednesday in the office of the company, 28, Royal Exchange Square, Glasgow—Mr. James S. Dixon, LL.D., presiding. The Chairman, in moving the adoption of the report, said with regard to the report and balance sheet of operations during the past year the results might be looked upon as satisfactory. The outstanding feature was the numerous advances—five in number—that occurred in the wages of shale miners. Unlike the coal-masters, the oil companies suffer not only from this increase in miner's wages, but also from the consequent increase in price of coal. Under these two headings of wages and coal the additional outlay, as compared with the previous year, was not less than £36,000, but the prices obtained during the year for the refined liquid products of the company were, fortunately, so much better as to nearly equal that amount. The world's production of paraffin wax was being somewhat augmented at present by an increased output, principally from the Galician oil fields, but the increase was not sufficient to interfere to any great extent with the present satisfactory relationship between supply and demand. As to the prospects for the current year, they had already secured under contract higher prices for a large proportion of their make of sulphate of ammonia, which was an important product of the oil companies, and which it was satisfactory to know was steadily gaining ground as a fertiliser among agriculturists and horticulturists in this country, and even to a greater extent in some foreign countries, Japan in particular having become in recent years a very large importer. The movements of naphtha were not so active as they were early last year owing to the strikes and general depression affecting the ship-building trade on the Clyde and on the Tyne side; but the other liquid products of the company were in fairly good demand and the prospects favourable. He moved that the directors' report be adopted, and that £13,643 1s. 1d. be written off for depreciation; that a dividend at the rate of 6 per cent. on the Preference shares, less Income Tax, and of 17½ per cent. on the ordinary shares of the company, free of Income Tax, payable on June 4th and December 4th next, be declared; that £1,747 16s. 3d. be applied in payment of Income Tax on the dividend of the ordinary shares; that £10,717 17s. 8d. be placed to the credit of retort account; that £10,000 be added to reserve fund; and that the balance of £2,610 17s. 9d. be carried forward to the current year.

Mr. John Gemmell seconded, and the report was adopted. Mr. John Watson Stewart was re-elected to the board.

THE UCHTA OIL FIELD.

The *Neftiannoie Dielo*, in its most recent issue, publishes data of considerable interest concerning the Uchta oil field, in the Petchora district, in the north of Russia. This information is the result of the latest investigations carried out in that locality, and was communicated at the conference recently held in St. Petersburg, with a view to deciding upon the steps to be taken to develop the oil field.

The results of the geological investigations were communicated to the conference by Mr. Polevoi, mining engineer and geologist, who took part in Captain Voronoff's expedition. The objects which Mr. Polevoi had in view in his investigations were—(a) detailed investigation of the series of Devonian deposits; (b) the tectonic conditions of the locality; (c) establishing the conditions of the occurrence of the petroleum deposits; (d) the possibility of developing there a petroleum industry.

With the above objects in view Mr. Polevoi, together with Mr. Andersen, geologist, made a series of trips from the Sidoroff station to the estuary of the Uchta; up that river to the coal deposits, along the rivers Tchuta, Yareg Gerdt-Yoll, Neft-Yoll, Polovinny-Yoll, Krochall, Domanik; and to the south along the Izhma, Sedia, Lya-Yoll, up to the springs of the Lun-Voja and Voi-Voja. In this way was investigated the central part of the south-western end of the Tuman range, which proved to represent Devonian strata, bent in anticlinals, but with the central part thrown off. Of practical interest are only the Devonian deposits—the upper and middle Devon. The first of these divides into the upper mass of bituminous limestone-clay slate, known under the name of Domanik, containing 30 to 48 per cent. of volatile substances, and the lower sandy marl mass. All the natural outcrops of oil are subject to the sandy-marl horizon. The Domanik series are interleaved with layers of limestone containing tarry matters. The middle Devon consists of dolomite limestones, sandstone, marl, dolomite, micaceous sandstones, sandstone marls and bluish clay marls.

TECTONIC.—The Devonian formation takes the form of a gently sloping anticlinal fold, with the central part thrown off in the shape of a trench. The axis of the anticlinal has a direction of 330° – 150° . The dip of the wings reaches 8° . The average dip is equal to 5° , but nearer the axis it is 3° – 2° and even less. Apart from the main fold there are also some minor folds.

CONDITIONS OF PETROLEUM OCCURRENCE. Natural outcrops of petroleum are observed: on the Uchta, in the river bed below the Gerdt-Yoll along the banks near the Sidoroff barracks; along the river Tchuta, on the right bank near the Vangel borehole, higher up on the Tchuta, on the right bank; in addition to these, it is said, there are also outcrops in other localities, such as, for instance, along the Voi-Voj, Tchuta, Lun-Voj, Yareg and others. By artificial means, oil was obtained in many places, but the yield was small. The drilling was done by four-inch boreholes. The exceptions are only

the former prospecting wells of Lopatin and Sidoroff, with wooden casing and the last large diameter borehole of Mr. Gansberg. The depth generally was only between 140 and 210 feet, and only Von Wangel reached a depth of 581 feet and Gansberg 350 feet.

By their age, composition of petroliferous strata, their occurrence in gently-sloped anticlinals, the Tuman petroleum deposits resemble the Pennsylvania oil fields. Attention must mainly be directed to the sandstone. From the description of the North-American oil fields by Konshin, it will be observed that the Uchta sandstones are of a lesser thickness than the Pennsylvanian sandstones.

As to the cementation and porosity of the Uchta formation as compared to the Pennsylvania, it is difficult to draw any conclusions. Generally, Devonian deposits are not marked with the porosity of their sands. One cubic sagene of sand at Baku contains half of its volume of oil, or about 250 poods. In Pennsylvania, the Devonian sandstones contain only from one-fourteenth to one-twelfth of their volume of oil, or only 35 to 40 poods per cubic sagene. Apart from the sandstone, however, other formations, such as the dolomites of the middle Devon, may prove of practical importance.

It is difficult to estimate the possible reserves of oil in this region. In any case we cannot expect to find at Uchta what we find at Baku, and for a parallel it will be more correct to look to Pennsylvania. So far the flow of oil into the boreholes has been very small, but it must be borne in mind that hitherto only the upper strata have been touched by the drill, and no deep borings have yet been effected. In Pennsylvania, the best localities shew a reserve of 30,000 to 50,000 poods per dessatine, whilst the daily yield of a new well does not exceed 95 poods, and the average is 18 poods.

QUALITY OF CRUDE OIL.—Repeated analyses have fixed the specific gravity of Uchta crude oil within the limits of 0.811–0.912–0.923. The yield of illuminating oil is between 36 and 47.8 per cent. Uchta crude oil thus belongs to the heavy grades and by its chemical composition it is a paraffin oil and contains about 5 per cent. of solid paraffin, a fact which should be taken into account in laying a pipe line.

TECHNICAL CONDITIONS OF WORKING.—In imitation of Baku the rod drilling system is used at Uchta. In Pennsylvania, in view of the small reserve of oil per unit of area one borehole serves an area of four dessatines; at Baku the reverse is the case, the wells being drilled very close to one another. If we will take the reserve of oil at Uchta to be the same as in Pennsylvania. We find that from one well it will be possible to obtain only 120,000 poods of oil. At the same time the cost of a borehole 1,400 feet deep, according to the estimate prepared for Captain Voronoff for rod drilling, must cost 128,000 roubles, which will work out more than one rouble per pood of crude oil to be produced. It is therefore clear that for Uchta some other method of exploitation has to be found. For such method we

again have to look to America, where in spite of the smallness of the reserve of oil per unit of area the production of crude oil is nearly double that of Baku, thanks to the higher technical development, but chiefly thanks to special natural conditions which make the adoption of special technical methods possible. Thus, for instance, an eight-inch borehole with a depth of 1,050 feet is completed in America in three weeks, and costs 4,000 to 5,000 roubles, whilst a 12-inch or 14-inch well at Baku of equal depth takes one and a-half years to drill, and costs 50,000 roubles. The explanation is to be found in the fact that in America they do not use the rod system of drilling, but the rope system, where only one-fourth or one-third of the depth of the well is cased in, which materially cheapens and accelerates the work. This difference in technical methods is due chiefly to the fact that at Baku and generally when drilling in tertiary formations the boreholes do not keep without casing and easily become crooked, whilst the greatest advantage possessed by the Devonian formations is their hardness and the firmness of the walls of the boreholes which permits drilling without casing; and, consequently, makes possible the adoption of the quicker and cheaper rope system of drilling.

At Uchta only the adoption of the last-mentioned system of drilling can lead to the development of a petroleum industry, whilst rod drilling is doomed to failure, as by that method the most valuable property of the formations—their hardness—serves only as an obstacle.

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Notes from Galicia...

Production Figures.—The output of crude oil in the Boryslaw-Tustanowice field in January amounted to 97,190 tons, of which 16,580 tons was obtained at Boryslaw and 80,610 tons at Tustanowice.

To Transport Crude.—A special company has been formed for the purpose of organising the transport of crude oil from the wells to the refineries in whole trainloads. All the leading Austro-Hungarian refineries are participating in the scheme.

The Karpathen Petroleum Co. has completed one of their boreholes on the Crown Forest lands, with a yield of from 150 to 200 tons of crude oil daily. The Galicia Co. has succeeded in increasing the output of their old borehole on the Gartunkel plot at Boryslaw to 120 tons daily.

The Boryslaw Petroleum and Mineral Wax Co.—The ordinary meeting of the directors of the Laenderbaick, which controls the Boryslaw Petroleum and Mineral Wax Co., was recently held, when it was decided that the last-named company shall distribute for 1907 a dividend of 3 per cent.

Storage Facilities.—*Naphta* is informed that of the storage tanks which the Provincial Government are building for the benefit of the petroleum industry, six are already in course of erection, and two of these were to be completed by the end of March. Foundations have also been prepared for eight more tanks. The pipe line between these tanks and the railway is also nearing completion. The regulations prepared by the Provincial Government for the use of this installation as a public storage place are now being considered by the Ministry of Commerce.

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THE LABARGE OIL FIELD, WYOMING.

UNITED STATES
GEOLOGICAL REPORT BY . .
MR. ALFRED R. SCHULTZ. .

It is the purpose of this paper to give a short description of the occurrence of oil in Uinta county and to point out the probable geologic relations of the oil-bearing beds furnishing the oil recently discovered east of Labarge ridge to the oil-bearing shale that gives rise to the oil springs and wells in Southern Uinta county.

The occurrence of oil in south-western Wyoming has been known for nearly three-fourths of a century. Many of the early trappers and fur traders, who built Fort Bonneville and the trading post at Fort Bridger, knew the location of the oil springs in this region and visited them in their annual trapping tours. The first published account of oil in south-western Wyoming was the result of an examination made by the Mormons in 1847 on their pioneer journey across the great plains.

A few miles south-west of the Carter oil spring, in section 7, township 14 north, range 118 west, oil was found by the Oregon Short Line Railroad in 1900 and 1902, while constructing the Aspen tunnel, and a considerable oil seepage was encountered along the fault plane about 1,600 feet from the west portal of the tunnel. The oil springs along the east front of Absaroka ridge north of Kemmerer were probably referred to in Lander's report of 1859, where he makes the general statement that in the mountains along the divide in latitude 42 degrees north there are "beds of coal, iron, and slate and a spring of peculiar mineral oil which by chemical process may be made suitable for lubricating machinery." No further description of the spring is given and the exact location is not known. The later geologic reports do not mention oil springs north of the Fossil locality. Since 1905 prospecting and development work have continued in the region about Spring Valley. The Pittsburgh-Salt Lake Oil Co. has filed proof of labour on most of its property, and the people interested in oil are holding their locations. The Pittsburgh-Salt Lake Oil Co. discontinued drilling about December 15th, 1907, and will continue drilling again this spring. The International Consolidated Oil Co. is putting down a couple of wells and has been working all winter. Two other companies expect to commence work soon and the outlook is very promising for a great deal of development work the coming summer. During the last three months of 1907 the Pittsburgh-Salt Lake Oil Co. shipped seven cars of refined oil and two cars of gasoline.

North of Kemmerer no prospecting for oil was carried on during the oil excitement in Southern Uinta county. Oil discoveries have been reported, however, at various times from several localities along the east front of Absaroka Ridge and from Green river basin east of Meridian Ridge and Thompson Plateau. Considerable excitement was caused during the summer of 1907 by the discovery of oil east of Labarge Ridge in township 27 north, range 113 west. Numerous placer claims were soon staked out over the country between Labarge Ridge and Green River. Plans were destined to

prospect this region by churn and diamond-drill borings during the coming season.

The Labarge oil field lies along the east base of Labarge Ridge, and extends from Labarge Creek northward to the vicinity of North Piney Creek in township 28 north, range 113 west. The greater portion of the area forms a plain sloping gently eastward toward Green River. Tertiary topography, with its characteristic mesas and highly-coloured escarpments, is prominent in the western half of the area and along part of Green River. On the west the area is bounded by Labarge Ridge, which forms a prominent range 500 to 1,500 feet higher than the adjacent country, and attains an elevation of 9,200 feet at several points along its crest. The topographic features of this range, which is composed of Carboniferous, Devonian and Cambrian rocks, afford a marked contrast to those of the tertiary beds east of the range.

The east base of Labarge Ridge, or the eastern boundary of the paleozoic rocks, marks the location of an overthrust fault, which here brings "Upper Cambrian" beds in contact with Montana shales and sandstones. East of the fault lies the axis of a low anticline. This axis was observed in the cretaceous beds east of Labarge Ridge, in township 28 north, range 113 west. The dips on both sides of the anticline are from 20 degrees to 35 degrees. Within a short distance to the south all traces of the east limb of the anticline in the cretaceous beds are lost beneath the tertiary beds, which here dip toward Green River at approximately 5 degrees. The beds along the west limb of the anticline are exposed at several localities and dip at 20 degrees to 45 degrees north, 70 degree west. The southward extension of the anticlinal crest may be represented by the low arch in the tertiary beds in the southern portion of township 27 north, range 113 west.

The oil-bearing shale of Southern Uinta county does not outcrop on the Labarge ridge locality. The oil, however, in this field is believed to come from the same horizon as in Southern Uinta county, namely, that of the Aspen (Benton) shale. None of the natural oil springs in South Uinta county occur along the outcrop of the shale that supplies the oil in the Spring Valley wells. So far as field observations have been made, no trace of oil was seen anywhere along the outcrop of the Aspen shale. The springs are all in the region of profound disturbance along the Absaroka fault and its associated secondary faults. The oil springs of Hillier Fault, the Carter oil spring, and the seepage near the west-end of the Aspen tunnel are located along a secondary fault, but those on Twin Creek lie along the line of the main fault. The oil observed at all these springs probably represents leakage from the oil-bearing shale along the fault line, having been forced up through the water which has penetrated to this shale along the fault contact.

(To be concluded.)

The Petroleum Export Trade of Batoum and Novorossisk during 1907.

(Compiled by Messrs. LANE and MACANDREW, 26, Great St. Helens, London).

From BATOUM.

	REFINED.				LUBRICATING.		RESIDUUM.		SOLAR.	
	IN BULK. (Poods).		CASES.		IN BULK. (Poods).		IN BULK. (Poods.)		IN BULK. (Poods.)	
	1907.	1906.	1907.	1906.	1907.	1906.	1907	1906.	1907.	1906.
BRITISH ISLES	6,514,756	6,444,429	..	..	1,188,999	1,220,031	97,788	128,013	..	811,212
FRANCE .. .. .	..	35,138	..	..	1,248,932	1,473,448	607,574	362,928	11,693	..
GERMANY	1,358,087	1,197,976	..	..	2,335,747	2,163,831	32,524	..	..	14,663
HOLLAND	1,555,093	1,010,615	..	..	..	..	..	..	..	..
BELGIUM	1,469,477	1,149,550	..	..	2,104,096	1,732,242	566,931	266,476	..	14,662
NORWAY .. .. .	..	..	..	..	..	..	..	..	..	..
SWEDEN .. .. .	..	..	..	..	..	..	..	..	..	..
DENMARK .. .. .	..	..	..	..	..	..	..	..	..	..
FINLAND .. .. .	..	..	..	..	..	..	..	..	..	..
RUSSIA (BLACK SEA PORTS)	2,786,065	3,583,916	..	..	..	..	..	..	..	..
SPAIN AND PORTUGAL ..	119,828	..	..	..	100,934	143,573	..	..	11,694	..
MALTA	236,466	59,593	..	..	..	..	..	..	43,251	..
ITALY	716,796	364,732	..	..	96,638	37,780	418,692	176,249	..	..
AUSTRIA-HUNGARY ..	..	117,349	..	..	340,920	211,688	..	38,254	..	..
GREECE .. .. .	..	..	99,424	80,000	..	..	..	..	..	..
TURKEY IN EUROPE ..	..	..	1,231,480	1,155,356	..	..	..	..	..	..
" ASIA	14,249	..	584,527	585,506	..	..	..	..	..	..
CONSTANTINOPLE, F.O.	..	..	1,075,570	514,251	..	..	..	..	..	..
ROUMANIA .. .. .	..	..	..	..	..	..	..	..	..	..
AFRICA (NORTH) ..	635,512	61,922	..	..	..	..	..	..	..	..
EGYPT	3,302,863	3,059,168	115,025	38,735	..	..	..	..	..	..
AFRICA .. .. .	..	..	1,000	1,000	..	..	..	..	..	..
JAVA, PADANG, ETC. ..	..	..	..	..	..	..	..	..	..	..
STRAITS, RANGOON, PHILIPPINES, SAIGON, BANGKOK, ZANZIBAR, and VILADIVOSTOCK ..	616,904	310,893	..	..	..	..	..	..	..	..
INDIA, INCLUDING ADEN, RED SEA AND PERSIAN GULF	1,962,728	..	227,235	279,485	..	..	..	..	..	..
CHINA .. .. .	..	..	..	..	..	..	..	..	..	..
JAPAN .. .. .	..	..	..	..	..	..	..	..	..	..
EASTERN PORTS ..	..	..	..	..	..	..	..	..	..	..
TOTALS	21,288,824	17,395,281	3,334,261	2,654,337	7,416,266	6,982,593	1,723,509	971,920	66,638	840,537

REFINED OIL, in barrels, was exported to the extent of 6 barrels in 1907 and 966 barrels in 1906; LUBRICATING, in barrels, 25,347 in 1907 and 24,810 in 1906; RESIDUUM, in barrels, 8,759 in 1907 and 4,878 in 1906; DISTILLATE AND CRUDE, in bulk, 704,788 poods in 1907 and 325,200 poods in 1906.

From NOVOROSSISK.

BRITISH ISLES .. ..	..	707,360	..	..	..	..	..	40,907	..	145,510
FRANCE	318,627	..	..	..	..	..	..	168,738	..	..
GERMANY	335,312	1,214,007	..	..	..	..	..	40,710	..	..
HOLLAND .. .. .	..	269,755	..	..	..	..	..	..	..	..
BELGIUM .. .. .	..	..	..	..	..	..	..	37,035	..	..
RUSSIA	1,424,667	688,280	..	..	..	..	1,550,735	1,380,951	..	..
SPAIN AND PORTUGAL ..	..	..	..	..	..	..	..	99,066	..	..
MALTA .. .. .	..	124,738	..	..	..	..	..	..	..	..
AUSTRIA-HUNGARY ..	60,112	..	..	..	..	..	..	..	..	..
ITALY .. .. .	..	..	..	..	..	..	..	74,302	..	..
AFRICA (NORTH) ..	..	121,175	..	..	..	..	..	..	..	..
EASTERN PORTS ..	..	..	..	..	..	..	..	..	..	..
TOTALS	2,138,718	3,125,315	..	..	..	..	1,550,735	1,841,709	..	145,510
TOTAL EXPORT BATOUM AND NOVOROSSISK ..	23,427,542	20,520,596	3,334,261	2,654,337	7,416,266	6,982,593	3,274,244	2,813,629	66,638	986,047

NOTE—In addition to the above figures, a considerable quantity of Benzine was exported from Novorossisk, details of which are as follows :—

	1907.		1906.		Increase.	Decrease.
	BULK (Poods).		BULK (Poods).		BULK (Poods).	BULK (Poods).
BRITISH ISLES	62,028	..	62,028	..
FRANCE	1,398,488	643,809	754,679	..
GERMANY	465,222	257,713	207,509	..
TOTALS	1,925,738	901,522	1,024,216	..

The American Oil Market.

New York, Week ended May 9th.

The renewal of more active operations in the Eastern fields has suffered a temporary check in the severity of the storms which have swept this section of the country, damaging many of the rigs and rendering the roads almost impassable for hauling machinery and supplies. The interval, however, has not been lacking in developments of more than usual interest, particularly in West Virginia, a well of the gusher type having been drilled in the Battelle district of Monongalia county. The first report credited it with starting at the rate of 15 barrels an hour and a couple of days later it reached its high record of 740 barrels a day. At this point it shewed a marked decline and its flow became irregular, but a later report placed its capacity in excess of 500 barrels. This producer was encountered in the fourth sand, where the formation was so varied that further test work in the vicinity is likely to be attended with disappointing results. The company, which brought in the successful well, controls considerable adjacent territory and has made locations for several test wells. Marion county in the same State furnished a noteworthy completion in the Lincoln district, which yielded 260 barrels the first twenty-four hours, says the *Oil, Paint and Drug Reporter*, but it could not maintain this high record, and according to a late report it had declined to 115 barrels. The Follansbee pool of Brooke county has added another producer to its already creditable list, the new well coming in with a reported capacity of 250 barrels a day, declining since to 200 barrels. The producing limits of both the Follansbee and the Holloday's Cove pool in Brooke county, it is believed, have been well defined. In the high grade section of South-eastern Ohio the Reas run district of Washington county is to the front with a producer which yielded 220 barrels the first twenty-four hours after it had been given its second shot. The feature of the Clinton lime formation of Fairfield county, which started at approximately 300 barrels a day, has during the interval declined to a little more than 100 barrels. Some important tests in this formation are due shortly. Our correspondent in the Illinois field reports considerable damage to derricks and power plants in the southern section by heavy storms. Another factor to retard developments is the sale of large realty interests and the pendency of other important transactions. The April report from Illinois shews little change from the March results, completions numbering 10 more, and the new daily production being heavier by 152 barrels. Returns from the Mid-Continent field for April are of a slightly more favourable character than was anticipated, the completions numbering 266, or 18 more than were drilled during March. In the absence of detailed reports on April operations in the Gulf coast region, little of new interest is to be noted. Spindle Top, Texas, has been the scene of a completion. Quotations for Gulf coast crude continue to decline. Advices from Californian report continued activity in the various fields of that State, and a consequent increase in production.

REFINED AND PRODUCTS.—The export movement, the activity of which has been the leading feature of the local market for refined during recent weeks, has sustained a check during the interval, clearances amounting to 7,547,030 gallons, against 16,049,250 gallons, recorded previously. Of the former amount 4,675,000 gallons were shipped in bulk, or about one-half the quantity carried by the tank fleet during the former week. Chartering for forward account has also been of comparatively light proportions, the only engagement reported being one of 160,000 cases for May shipment to Hankow, New York loading. Values have been well maintained, and the outlook is regarded as favourable for continued firmness. The consuming movement in the products for local account has not shewn the same degree of activity, as we had occasion to note previously, weather conditions having been less favourable. The decline in the export demand has continued, our record of clearances for the

week indicating a total of 95,800 gallons, while for the former period the total reached 460,950 gallons. Values for all descriptions have remained unchanged. Residuum for export received improved attention, 20,600 gallons having been forwarded during the week.

CLOSING QUOTATIONS.

	CRUDE.	Week ended	
		May 2.	May 9.
	In cents per gallon.	1908.	1908.
Pennsylvania crude in bbls.	—	—
Pennsylvania crude in bulk	—	—
Residuum, bbls. for export	—	—

CRUDE AT THE WELLS.

The quotations for oil represented by credit balances were:—

		Week ended	
		May 2.	May 9.
		1907.	1908.
Pennsylvania .. ..	.. ..	\$1.78	\$1.78
Tiona .. ..	.. ..	1.78	1.78
North Lima .. ..	.. ..	0.94	1.04
South Lima .. ..	.. ..	0.89	0.99
Indiana .. ..	.. ..	0.89	0.99
Illinois, heavy, below 30 deg.	.. ..	—	0.60
Kansas and Indian Ter., 32 deg. and above	.. ..	0.41	0.41
Heavy .. ..	.. ..	0.28	0.28
Humble, Tex. .. ..	.. ..	—	0.64
Saratoga .. ..	.. ..	—	0.61
Sour Lake, Tex. .. ..	.. ..	—	0.64
Jennings, La. .. ..	.. ..	—	0.67
CANADIAN OIL:—			
Petrolia .. ..	.. ..	1.34	1.44
Oil Springs, less pipeage .. ..	.. ..	1.41	1.51

REFINED—FOR EXPORT.

		Week ended	
		May 9.	
	In cents.	S.W.	W.W.
Barrels, cargo	per gal.	8.75	@10.75
Philadelphia	8.70	@10.70
Bulk, New York	5.00	@ 7.00
Bulk, Philadelphia	4.95	@ 6.95
Cases, New York	10.90	@13.90
Cases Philadelphia	10.85	@13.85

REFINED IN CASES—110 FIRE TEST.

		Week ended	
		May 2.	May 9.
		1908.	1908.
3,000 to 10,000 .. ..	.. ..	11.05	11.05
1,000 to 3,000 .. ..	.. ..	11.10	11.10

REFINED—JOBBER LOTS.

In barrels, pkgs. included.

		Week ended	
		May 2.	May 9.
120 fire test, S.W. ..	in barrels	12	12
130 fire test, S.W. ..	.. ..	12½	12½
150 fire test, W.W. ..	.. ..	13½	13½
In bulk from tanks ..	.. ..	10	10
300 fire test .. ..	.. ..	13½@14	13½@14

NAPHTHA AND GASOLINE.

		Week ended	
		May 2	May 9.
Naphtha, Auto, 66 @ 72 deg.	.. ..	14.00	14.00
Gasoline, 86 deg. .. ..	.. ..	23.00	23.00

PENNSYLVANIAN OIL RUNS from April 21st to May 4th were:—April 21st, 211,136¹; April 22nd, 202,917¹; April 23rd, 198,322¹; April 24th and 25th, 249,784¹; April 26th, 49,622¹; April 27th, 372,422¹; April 28th 229,229¹; April 29th 118,788¹; April 30th, 240,373¹; May 1st and 2nd, 283,331¹; May 3rd, 112,280¹; May 4th, 111,020.

THE DELIVERIES OF PENNSYLVANIAN OIL from April 22nd to May 5th were:—April 22nd, 186,953; April 23rd, 162,974¹; April 24th, 220,595¹; April 25th and 26th, 433,517; April 27th, 173,949¹; April 28th, 211,706¹; April 29th, 198,962¹; April 30th, 147,607¹; May 1st, 152,625¹; May 2nd and 3rd, 301,783; May 4th, 214,119¹; May 5th, 200,532¹.

CLEARANCES FOR THE WEEK.

During the week ended May 8th and since Jan. 1, the clearances of petroleum, in gallons, from the port of New York, were as follows:—

	Week.	Year.	1907.
Refined	7,547,030	200,469,075	191,922,570
Crude	—	7,845,810	1,039,879
Naphtha	95,800	3,802,505	2,228,670
Residuum	20,600	644,500	322,700

EXPORT STATISTICS.

The total exports from the port of New York and from the United States have been:—

	Gallons.
From New York, week ended May 8th ..	10,062,707
Total from New York, from Jan. 1st, 1908 ..	288,471,244
Same period last year	255,929,405
Increase	32,541,839
From United States, week ended May 8th ..	23,390,757
Total from United States, since Jan. 1st, 1908 ..	525,710,618
Same period last year	462,558,728
Increase	63,151,890

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The "Review" Shipping List.

MAY 22, 1908.

(The following abbreviations are used in this table:—L. Left; P. Passed; Arr. Arrived; Sp. Spoken; Tr. Trading.)

Vessel.	From.	For.	Latest Date and Position.	Vessel.	From.	For.	Latest Date and Position.
ALCHYMIST	Hamburg ..	Terneuse ..	Arr. May 17	EUPLECTELA	Calcutta	Samboe	Arr. May 14
ALEMBIC	Bilbao	Lisbon	Arr. May 11	EXCELSIOR	Rotterdam ..	New York ..	P. Lizard,
ALICE ISABELLE..	Sables	New York ..	Sp. April 30, 47 N,				May 10
AMERICAN	d'Olonne ..	Puerto.....	31 W	EZIO	—	—	Coasting Peru
	New York ..		P. Sand Key,	FRANCE MARIE ..	New York ..	Tarragona ..	L. May 16
APPALACHEE	Singapore ..	Moji	April 28	GEESTEMUNDE ..	Philadelphia	Stettin.....	In Port, May 19
APSCHERON.....	Batoum	Rouen	Arr. May 4	GENESSE	Manchester	Galveston ..	L. Port Eads,
ARAL.....	Rotterdam ..	Tyne	L. May 18		& N. Orleans		May 10
ARAS.....	Blyth	Philadelphia	Arr. May 8	GEORGIAN	Novorossisk	Brunsbüttel..	P. Dover,
ARGYLL	—	—	L. May 15	PRINCE			May 20
ASHTABULA	San Francisco	Hankow	Coasting U.S.	GOLDMOUTH	Singapore ..	Europe	L. May 9
			(Pacific)	GUTHEIL	Philadelphia	Hamburg ..	Sp. May 8, 40 N.,
ASTRAKHAN.....	Hamburg ..	Tyne	At Shanghai,				65 W.
ATLAS	—	—	May 5	HAINAUT	Antwerp	New York ..	P. Dungeness,
			Arr. May 17				May 20
AUGUSTA	London	Baltimore ..	Coasting U.S.	HARRY	New Orleans	Port Arthur	L. May 11
AUGUST KORFF..	Manchester	Philadelphia	(Pacific)	WADSWORTH			
			Off the Wight,	HELIOS.....	Bremerhaven	New York ..	P. Dunnet Head,
AUREOLE	Bremerhaven	Antwerp	May 7				May 8
AZOV.....	—	—	P. O. Hd. Kinsale	HERMIONE	Hamburg ..	Philadelphia	P. Dover,
			May 14				May 20
BAKU STANDARD	Rouen.....	Novorossisk	In Port, May 19	HOTHAM	Penarth	Kustendje ..	P. Gibraltar,
			Trading on W.C.	NEWTON			May 18
BALAKANI	London	Port Arthur	of South Amca.	IMPERIAL	—	—	Tr. on Lakes btn.
		(Texas)	At Malta,				U.S.A. and Can.
BATOUM	Novorossisk	London	May 17	IOANNIS COUTZIS	Dunkirk	Cardiff	Arr. May 12
			L. May 7	IROQUOIS	New York ..	London	L. May 9
BAYONNE	Leghorn	Portici.....	P. Dover,	J.B.AUG.KESSLER	Samboe	Europe	P. Gibraltar,
BEACON LIGHT ..	New York ..	Havana	May 20				May 17
BLOOMFIELD	Penarth	Antwerp	L. May 14	JAMES BRAND	London	Port Arthur	At Fernandina,
			L. May 5			(Texas)	May 20
BORJOM	Batoum	Alexandria ..	P. Lizard,	JULES HENRI	Marseilles ..	New York ..	P. Tarifa,
			May 20				April 30
BRILLIANT	Tyne	New York ..	Cld. Constant'ple,	KURA	Hull	Philadelphia	P. Dunnet Head,
			May 12				May 18
BROADMAYNE	Rouen	Tyne	May 20	LA CAMPINE.....	Philadelphia	Antwerp	In Port, May 19
BULLMOUTH	Samboe	Shanghai ..	P. Nantucket,	LA FLANDRE	Ghent	Philadelphia	P. Lizard, May 20
BULYSES	Bombay	Aroe Bay ..	May 20	LA HESBAYE.....	New York ..	Antwerp	In Port, May 19
BURGERMEISTER	Philadelphia	Aarhus	In Port, May 13	LA VIGUESA	Port Arthur	Buenos Ayres	L. Mar. 13
PETERSEN			L. May 6	(now named "Pro-	(Texas)		
CALCUTTA.....	San Francisco	Shanghai ..	L. May 14	gress Argentina")			
CAPTAIN A. F.	Hamburg ..	New York ..	L. May 14	LACKAWANNA....	Tyne	New York ..	In Port, May 9
LUCAS			P. Del. Break.,	LANSING.....	Kihei	Pt. San Luis	L. April 29
CARDIUM	Kobe	Balekappan	May 10	LE COQ.....	—	New York ..	P. Dunnet Head,
CATANIA.....	Seattle	San Francisco	Arr. abt. April 21				May 16
			L. May 1	LOUTSCH	—	Odessa	In Port, May 6
CAUCASIAN	Pera.....	London	P. Tatoosh,	LUCERNA	Rouen	New York ..	L. May 16
CHARLOIS	Philadelphia	Amsterdam..	May 4	LUCILINE	—	Batoum	P. Ushant,
CHESAPEAKE	Cardiff.....	Liverpool ..	L. May 20				May 21
CHESTER	Antwerp	New York ..	Arr. May 19	LUMEN.....	Port Talbot	Batoum	L. May 20
CIRCASIAN	—	—	In Port, May 20	LUX	—	New York ..	L. Gibraltar,
PRINCE			Arr. May 19	MAKKAVEI	Odessa	Batoum	May 15
CITY OF EVERETT	New York ..	Philadelphia	Trading on W.C.	MANHATTAN	Antwerp	Cardiff.....	L. May 2
CLAM	Dartmouth..	—	of South Amca.	MANNHEIM	Amsterdam..	Philadelphia	In Port, May 20
			L. May 8				P. Scilly,
COL. E. L. DRAKE	Tacoma	San Francisco	At Ibrail,	MARGARETHA ..	Kustendje ..	Genoa.....	May 10
COWRIE	Aroe Bay ..	Rotterdam ..	May 14	METEOR	Shanghai ..	Thameshaven	Arr. May 17
CUYAHOGA	Manchester	Philadelphia	In Port, April 25	MEXICAN PRINCE	Cardiff.....	Kustendje ..	Arr. May 15
CYMBELINE	Port Arthur	Amsterdam..	In Port, May 17				P. Gibraltar,
	(Texas)		Arr. May 11	MIRA	Port Arthur	Hamburg ..	May 19-20
CZAR NICOLAI II.	Batoum	Hamburg ..	P. Scilly,		(Texas)		L. Newport News,
DAGHESTAN.....	Batoum	Hamburg ..	May 20	MUREX.....	Madras	Aroe Bay ..	May 13
			In Port, May 19	NARRAGANSETT..	New York ..	London	L. May 12
DAKOTAH	San Francisco	Hong Kong..	P. Constant'ple,	NAVAHOE (Barge)..	New York ..	Flushing....	L. May 10
DELAWARE	Plymouth ..	Philadelphia	May 14	NERITE	—	—	L. May 7
			Arr. abt. April 22				Tr. in China
DERBENT	Batoum	Antwerp	P. Scilly,	NEW YORK	New York ..	Southampton	Seas
			May 13	NORTHWESTERN.	Valdez.....	Seattle.....	L. May 16
DEUTSCHLAND ..	Stettin.....	New York ..	P. Constant'ple,	OAKWOOD	Liverpool ..	Cienfuegos..	Arr. May 4
			May 8	OBERON	Hamburg ..	Philadelphia	L. May 15
DIAMANT'	New York ..	Rotterdam ..	P. Dunnet Head,	OCEAN	Philadelphia	Antwerp	L. May 10
			May 12				P. Beachy Head,
EDWARD	Hull.....	New Orleans	P. Dover,	OILFIELD	Rouen	Batoum	May 20
DAWSON			May 20	ORIFLAMME	—	Havre	Arr. May 10
ELAX.....	Batoum	Bombay	Off the Wight,			& Rouen	L. Malta,
ELISE MARIE	New York ..	Stettin.....	April 27	OSCEOLA	Montevideo	Dunkirk	May 20
ENERGIE	Gothenburg	Philadelphia	Arr. May 9	OTTAWA	London and	Sabine	At St. Vincent
			Arr. May 19		N. Orleans		(C.V.), May 19
ERIVAN	Tyne	Batoum	P. Dunnet Head,	OURAL	Batoum	Manchester..	L. Port Eads,
			May 13				May 1
EIELKA	Batoum	Venice.....	P. Gibraltar,	PALEMBANG	—	—	At Liverpool,
			May 13				May 20
			Arr. May 18				Tr. East Indies &
							China Seas

Vessel.	From	For.	Latest Date and Position.	Vessel.	From.	For.	Latest Date and Position.
PAULA	Philadelphia	Stockholm ..	P. Butt of Lewis, May 18	SNOWFLAKE.....	Philadelphia	Skanlevig ..	L. May 15
PECTAN	Philadelphia	London	Arr. May 19	SOYO MARU	Yokohama ..	Gaviota	L. April 5
PENNOIL.....	Tyne	Philadelphia	Arr. May 16	SPONDILUS	Samboe	Europe	L. May 13
PERLAK	Singapore ..	Soesoe.....	L. April 14	STANDARD	Danzig	New York ..	P. Dunnet Head, May 17
PHOEBUS	Hamburg ..	New York ..	P. Nantucket, May 20	STROMBUS	Thameshaven	—	P. Dover, May 16
PINNA	Gaviota	Yokohama ..	L. April 30	SUN	Philadelphia & New York	Avonmouth	Arr. April 13
POTOMAC	Manchester	Philadelphia	At Eastham, May 16	SUNLIGHT.....	Philadelphia	Calais	P. Del. Break, May 4
PROMETHEUS....	Rotterdam..	New York ..	P. Dungeness, May 20	SURAM.....	Newport	Port Arthur (Texas)	P. Fastnet, May 15
PRUDENTIA	—	Singapore ..	Arr. April 12 for Amoy & Swatow	SUWANEE	Sunderland ..	Kustendje ..	P. Dover, May 18
QUEVILLY.....	Rouen.....	New York ..	L. Havre, May 2	SVIET	Batoum	Odessa	L. May 3
REDOVA	Sydney	Liverpool ..	In Port, May 20	TELENA	Singapore ..	Barrow	L. Port Said, May 16
RION.....	Philadelphia	Venice.....	P. Gibraltar, May 14-15	TEREK.....	—	Philadelphia	P. Dunnet Head, May 16
ROCK LIGHT	London	Kustendje ..	Arr. May 20	TIFLIS	Batoum	Antwerp....	P. Sagres, May 18
ROMANY.....	Samboe	Palembang..	L. May 15	TIOGA	Port Arthur (Texas)	Liverpool ..	L. Sabine Pass, May 8
ROSSIJA	Sfax.....	London	In Port, May 20	TONAWANDA	Shanghai ..	San Francisco	Arr. May 14
ROTTERDAM	New York ..	Rotterdam ..	Arr. May 8	TROCAS	Suez	Balekappan	L. May 7
RUSSIAN PRINCE	New York ..	Tampico....	Arr. May 4	TUSCARORA	Singapore ..	San Francisco	Arr. May 17
S.O. (Barge No. 95) ..	Hamburg ..	New York ..	L. May 1, in tow of "Capt. A. F. Lucas"	VEDRA.....	Palembang..	Nagasaki....	L. Singapore, April 24
SALAHADJI	—	—	Tr. Sts. Settlem'ts and Java Seas	VILLE DE DIEPPE	Rouen.....	Philadelphia	L. April 1
SAN CRISTOBAL..	Rochester ..	Minatitlan ..	P. Sand Key, April 9	VOLUTE	Soesoe.....	Samboe	L. May 11
SAN IGNACIO DE LOYOLA	Philadelphia	Pasages	L. May 11	WASHINGTON....	Kustendje ..	Bombay	At Port Said, May 12-13
SAXOLEINE	Tyne	New York ..	L. May 5	WEEHAWKEN	Liverpool ..	New York ..	L. May 16
SEMINOLE.....	San Francisco	—	L. May 4	WILLKOMMEN....	Hamburg ..	Philadelphia	Arr. May 15
SERVIAN	—	Batoum	Arr. May 21	WINNEBAGO	San Francisco	Itosaki and Shanghai	L. Mar. 28
SINGU	—	—	Tr. in East Indies				

Latest Market Intelligence.

LONDON OIL MARKET.

Supplied by Messrs. Benjamin & Gee, 31, St. Mary Axe, E.C.

May 22nd, 1908.

The prices of Petroleum have remained unchanged since we last reported:—Russian, 5⁷/₈d. to 6d.; American, 6¹/₂d. to 6⁵/₈d.; Water White, 7¹/₂d. to 7⁵/₈d.; Roumanian, 6³/₄d.

LUBRICATING OILS.

The latest quotations are as follows:—

American pale, £7 2s. 6d. to £10 15s.

American dark cylinder, from £9 2s. 6d.

American filtered cylinder, from £11 15s.

No. 1 Russian, £10 5s.

TURPENTINE.

Turpentine has very slightly advanced since our last report, being firmer for Spot. American Spot, 33s. to 33s. 3d.; June, 32s.; July to December, 32s. 7¹/₂d.; September to December, 32s. 9d.; January to April, 33s. 9d. to 34s.

LIVERPOOL OIL MARKET.

May 21st.

Refined oils are quiet, and sellers quote 6³/₄d. for Russian, Galician or Roumanian; and 7¹/₄d. to 8¹/₄d. per gallon for American.

PETROLEUM SPIRIT continues at 1s. 0¹/₂d. to 1s. 3d. per gallon for American deodorised, according to quality on the spot.

LATEST AMERICAN PRICES.

NEW YORK, May 1st.

Refined, in cases, is steady at 10.90; Standard White, 8.75; Credit balances, 1.78c.

PHILADELPHIA, May 21st.

Standard White is still quoted at 8.70.

RUSSIA.

BAKU, May 18th.

The Baku oil market is unchanged. Crude oil, spot, 22-22¹/₂ copecs per pood. Residuals, future delivery, 24 copecs. Kerosene, in ships, 28 copecs.

BELGIUM.

ANTWERP, May 16th.

The petroleum market is firm. Price of Standard White, spot, 22 francs per 100 kilos.

FRANCE.

PARIS, May 16th.

Illuminating oil is quoted in bulk, in whole tank waggons, 21 francs per hectolitre; spirit, 31.75 francs per hectolitre. Special white oil, in barrels or cans, 29 francs per hectolitre.

GERMANY.

HAMBURG, May 16th.

The kerosene market is quiet. The price of American Standard White is 7.55 marks per 50 kilos; Russian, 7.35 marks.

ROUMANIA.

May 14th.

Crude oil from different fields, including	Franks.
pipe line charges, per 100 kgs. ...	4.70-4.80
Refined oil, exclusive of taxes ...	6.50
Benzine, 717-720, including taxes ...	20.00
Benzine, 750-760 ...	15.00-15.50
Residuals in tank waggons, at refinery ...	3.90 4.00
Paraffin ...	120.00

PRICES FOR EXPORT.

Refined oil in tank waggons, per 100 kgs.	7.50-8.00
Benzine, sp. gr. 0.710-0.715, f.o.b. ...	17.00-18.00
" sp. gr. 0.715-0.720 " ...	15.00-16.00
" sp. gr. 0.730-0.740 " ...	10.00-11.00
" sp. gr. 0.745-0.755 " ...	9.00-10.00

INDIA.

BOMBAY, May 1st.

Standard Oil Co., of New York.

Current rates are:—

American, "Snowflake," 150 deg. ..	Rs. 6 4 2
" Chester, 76 deg. ..	4 12 2
" Monkey Brand, 76 deg. ..	4 6 2
" Bulk, 125 deg. (in local made tins) ..	3 14 0
" " 125 deg. (8 Imperial gallons) ..	3 4 0

The Asiatic Petroleum Company, Limited.

Current rates are:—

Burmah, bulk, loose, "Swan," per unit ..	2 14 0
" " new, tins, "Swan," per pair ..	3 8 0
Russian, bulk, loose, "Rising Sun," per unit ..	3 6 0
" " new, tins, "Rising Sun," per pair ..	4 0 0
" Anchor," cases, per case ..	4 8 0

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IMPORTS of PETROLEUM into UNITED KINGDOM

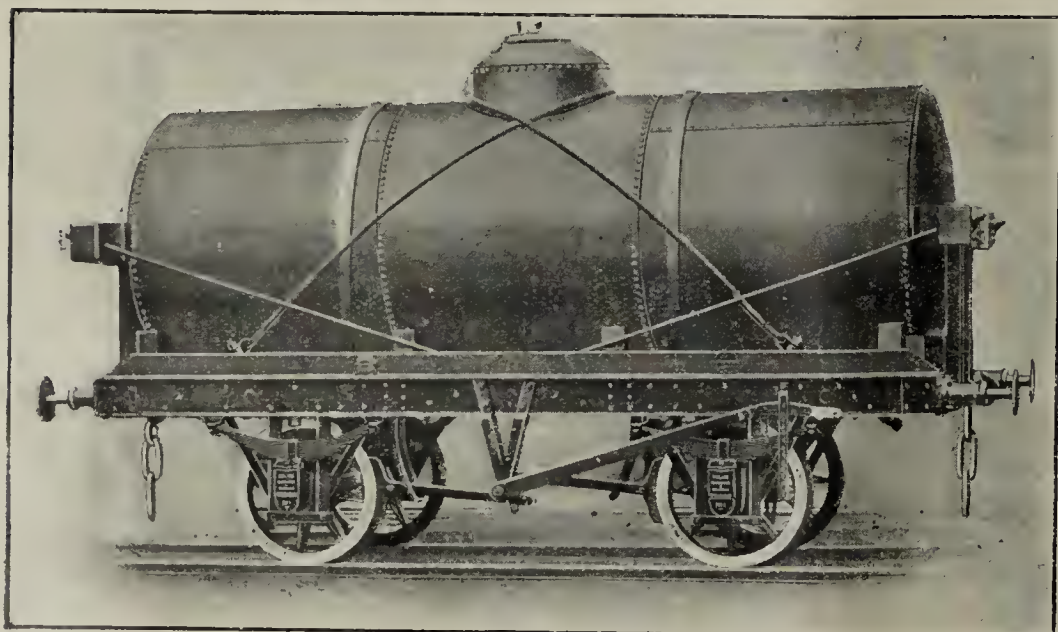
Specially prepared for
this Journal by . . .
the Custom House.

FOR THE WEEK ENDED 11TH MAY, 1908—

DATE.	PORT AND IMPORTERS.	DESCRIP- TION.	NO. OF GALS.	PORT WHENCE.
May. LONDON—				
5	Fielder, Hickman and Co..	Lub.	10,400	New York
5	Anglo-American Oil Co. ..	"	48,960	"
5	Perkins and Homer ..	"	2,600	Baltimore
5	British Petroleum Co. ..	"	460	Antwerp
5	R. Park and Co. ..	"	640	Marseilles
6	Mercantile Lighterage Co..	"	31,500	New York
6	London and India Dock Co.	"	510	"
7	G. and H. Green ..	"	4,000	"
7	London & India Docks Co..	"	4,600	Hamburg
7	Page, Son and East ..	"	600	Antwerp
7	H. Finkler and Co. ..	"	4,000	Fiume
8	Asiatic Petroleum Co. (Strombus)	Benzine	814,200	Balekappan
8	" ..	"	1,284,400	Pulo Samboe
9	T. H. Lee ..	Lub.	80	Hamburg
9	" ..	Lub. Gr.	1,180	"
11	American Express Co. ..	Lub.	30	New York
11	Page, Son and East ..	"	120	Antwerp
11	G. Haller and Co. ..	"	80	"
11	Lubricating & Fuel Oils, Ltd.	"	8,200	"
11	Argo Steamship Co. ..	"	250	Bremen
LIVERPOOL—				
5	J. T. Fletcher and Co. ..	"	240	Antwerp
6	Anglo-American Oil Co. (August Korff)	"	459,000	Philadel.
7	Bowring Petroleum Co. ..	"	1,850	"
7	" ..	Lub. Gr.	200	"
7	Dominion Line ..	Lub.	35,200	"
7	Crew, Levick, and Co. ..	"	28,150	"
7	W. B. Dick and Co. ..	"	12,260	"
7	Worthington and Boler ..	"	4,200	"
7	" ..	Lub. Gr.	200	"
7	A. Hopps and Sons ..	Lub.	5,360	Baltimore
8	Midland Railway ..	"	2,060	Philadel.
8	Meade-King, Robinson & Co.	"	33,400	"
8	" ..	"	1,600	Baltimore
9	Vacuum Oil Co. ..	"	6,000	New York
9	Valvoline Oil Co. ..	"	5,330	"
9	Ismay, Imrie and Co. ..	"	240	"
11	Geo. B. Taylor ..	"	10,000	"
11	" ..	"	38,560	"
11	Stockdale and Doel ..	"	280	Boston
11	A. Hopps and Sons..	Resid.	5,540	Newp't Nws.
BRISTOL—				
6	E. Stock and Sons ..	Lub.	2,240	Hamburg
6	British Petroleum Co. ..	"	5,340	Antwerp
6	Pickfords, Ltd. ..	"	450	"
7	" ..	Lub Oil and Paste	250	Hamburg
CARDIFF—				
6	British Petroleum Co. ..	Lub.	290	Antwerp
9	Aadresen and Dahl..	"	90	Christiania

DATE.	PORT AND IMPORTERS.	DESCRIP- TION.	NO. OF GALLS.	PORT WHENCE.
May GRIMSBY—				
5	J. Sutcliffe and Sons	Lub.	140	Antwerp
7	"	"	80	"
9	"	"	80	"
HARWICH—				
5	D. Howard ..	"	60	"
9	"	"	360	"
HULL—				
5	Wilsons and N.E. Railway Shipping Co.	"	840	Hamburg
5	Thos. Wilson, Sons and Co.	"	31,600	New York
6	Anglo-American Oil Co. (Suwanee)	Lamp	719,930	Philadel.
6	" ..	Gas	253,000	"
7	G. Hardy and Co. ..	Lub.	130	Antwerp
7	T. Wilson, Sons and Co. ..	"	1,200	Copenhagen
7	Wilsons and N.E. Railway Shipping Co.	"	15,600	Hamburg
7	T. Wilson, Sons and Co. ..	"	2,390	Antwerp
9	W. Gilyott and Co. ..	"	26,080	New York
MANCHESTER—				
7	Lancs. and Yorks. Railway	"	240	New York
7	D. Currie and Co. ..	"	160	Hamburg
7	H. J. Redfern ..	"	1,370	New York
7	Liverpool Storage Co. ..	Lamp	2,400	Philadel.
7	Bramwell, Fern and Co. ..	Lub.	6,470	"
7	C. H. Morton and Sons ..	"	4,040	"
7	Liverpool Storage Co. ..	"	15,200	New York
7	" ..	Lub. Gr.	800	"
7	Crew, Levick and Co. ..	Lub.	16,650	Philadel.
7	" ..	M. Colza	6,190	"
7	G. B. Taylor..	Lub.	193,840	"
8	" ..	"	2,000	Hamburg
8	F. Pearson ..	"	390	"
8	Anglo-American Oil Co. (August Korff)	"	849,600	Philadel.
MIDDLESBRO'—				
5	E. Harris and Co. ..	"	520	Antwerp
NEWCASTLE—				
9	Tyne-Tees S.S. Co..	"	4,720	"
PLYMOUTH—				
8	Anglo-American Oil Co. (Delaware)	Lamp	655,900	Philadel.
SOUTHAMPTON—				
7	American Line ..	Lub.	800	New York
7	White Star Line ..	"	500	"
ABERDEEN—				
5	J. Cook and Son ..	"	500	Riga
7	R. Cannon Reid and Co. ..	Lamp	8,400	Hamburg
GLASGOW—				
5	Anchor Line ..	Lub.	41,680	New York
5	" ..	M Colza	2,800	"
11	" ..	Lub.	7,280	Philadel.

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FOR ALL PURPOSES.**

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Best Welsh Soft Siemens-Martin Steel.
No imported steel used.

— QUOTATIONS ON APPLICATION.

IMPORTS.—(Concluded).

DATE.	PORT AND IMPORTER.	DESCRIPTION.	NO. OF GALLS.	PORT WHENCE.
May	GLASGOW—			
11	J. and A. Allan ..	Lub.	17,325	Philadel.
11	" ..	Resid.	360	"
	LEITH—			
5	W. Graham-Yooll and Co...	Lamp	4,560	Hamburg
5	J. Currie and Co. ..	Lub.	250	"
6	" ..	Lamp	3,100	"
6	" ..	"	15,430	"
6	G. Gibson and Co. ..	Lub.	1,000	Antwerp
6	J. Currie and Co. ..	"	400	Hamburg
6	" ..	"	120	Bremen
7	G. Gibson and Co. ..	"	120	Antwerp
9	J. Cormack and Co. ..	"	2,000	Riga
9	G. Gibson and Co. ..	"	360	Antwerp
11	J. Currie and Co. ..	"	6,280	Hamburg
29/4	W. Graham-Yooll and Co.	Lamp	8,720	"
	" ..	"	2,620	"
	GRANGEMOUTH—			
8	W. Graham-Yooll and Co...	"	2,000	"
8	J. Currie and Co. ..	Lub.	16,320	"
	Total for Week ..		5,830,045	
	FOR THE WEEK ENDED 18TH MAY, 1908—			
	LONDON—			
12	A. Brown and Co. ..	Lub.	2,000	Hamburg
12	R. Park and Co. ..	"	1,120	Marseilles
12	Produce Brokers' Co. ..	"	2,400	New York
12	T. H. Lee ..	Lub. Gr.	1,185	Hamburg
12	H. Johnson, Sons and Co...	Lub.	300	Antwerp
12	Schlieman's Oil Works ..	"	4,500	New York
12	Asiatic Petroleum Co. (Meteor)	Benzine	31,200	Pulo Samboe
12	" ..	"	1,326,000	"
13	Fielder, Hickman and Co...	Lub.	19,400	New York
13	London and India Docks Co.	"	80	Hamburg
14	Lubricating & Fuel Oils, Ltd.	"	2,060	Antwerp
14	London and India Docks Co.	"	200	New York
14	" ..	"	160	Messina
14	H. Finkler and Co. ...	Resid.	5,000	Trieste
14	Page, Son and East ..	Lub.	40	Antwerp
15	Anglo-American Oil Co. (Pectan)	Gas	2,484,740	Philadel.
15	Ocean Oil Co. ..	Lub.	6,400	"
15	London and India Docks Co.	"	670	"
15	T. L. Field and Co. ...	"	230	"
16	London and India Docks Co.	"	310	Hamburg
16	T. H. Lee ..	Lub. Gr.	395	"
16	" ..	Lub.	42	"
16	Mercantile Lighterage Co...	"	3,000	New York
16	R. Park and Co. ..	"	200	"
16	Anglo-American Oil Co. ..	"	33,600	Philadel.
18	Scott's Wharf ..	"	2,500	New York
18	Page, Son and East ..	"	240	Antwerp
18	" ..	Lub. Gr.	80	"
18	J. Harrison ..	"	1,200	"
18	Société Petroles de Grosnyé (Batoum)	Benzine	1,478,700	Novorossisk
	LIVERPOOL—			
12	Meade-King, Robinson & Co.	Lub.	5,000	New York
12	Liverpool Storage Co. ..	"	400	"
13	Burnaby and Chantrell ..	Lub. Gr.	110	Hamburg
13	Meade-King, Robinson & Co.	Mot. Spirit.	43,000	Rotterdam
14	Denbeigh Cowan and Co. ..	Lub.	1,740	Hamburg
14	Pickfords ..	Lub. Oil and Paste	620	"
15	Crew, Levick and Co. ..	Lub.	22,160	Philadel.
15	" ..	M. Colza	2,430	"
15	" ..	Resid.	2,315	"
15	G. B. Taylor ..	Lub.	42,800	"
15	W. B. Dick and Co. ...	"	19,225	"
15	S. R. B. Melling ..	"	800	New York
15	A. Hopps and Sons ..	"	10,675	Baltimore
16	Meade-King, Robinson & Co.	"	3,000	"
16	" ..	"	5,200	"
16	Meade-King, Robinson & Co.	"	20,000	Philadel.
16	Ismay, Imrie and Co. ..	"	760	New York
16	Vacuum Oil Co. ..	"	10,400	"
18	W. W. Jones Dooly & Co...	"	150	"
18	W. B. Dick and Co. ..	"	16,300	"
18	Taylor and Son ..	"	1,000	"
18	Valvoline Oil Co. ..	"	8,610	"
18	Geo. B. Taylor ..	"	9,160	"
18	Liverpool Warehousing Co.	"	3,200	"
18	R. Crooke, Jun. ..	"	2,240	"
18	E. H. Kellogg and Co. ..	"	2,000	"
18	H. E. Moss and Co. ...	"	240	Antwerp
	BRISTOL—			
12	Pickford's, Ltd. ..	Lub. Oil and Gr.	600	Hamburg
DATE.	PORT AND IMPORTERS	DESCRIPTION.	NO. OF GALLS.	PORT WHENCE.
May				
12	H. R. James and Sons ..	Lub.	8,600	New York
14	Heaton and Co. ..	"	400	"
14	Ford and Canning ..	"	26,680	Philadel.
14	M. Whitwell and Co. ..	Lamp	4,130	"
14	" ..	L. Resid.	10,920	"
14	W. Smith and Co. ..	Lub.	9,160	New York
14	" ..	Lamp	4,000	"
14	H. Pritchard and Co. ..	"	2,160	"
15	F. F. Fox and Co. ..	Lub.	4,221	Antwerp
15	W. Smith and Co. ..	"	20,200	Philadel.
15	" ..	P. Resid.	640	"
	CARDIFF—			
16	Vacuum Oil Co. ..	Lub.	19,400	"
16	W. Smith and Co. ..	"	3,000	"
16	" ..	M. Colza	4,000	"
16	Bowring Petroleum Co. ..	Lub.	1,470	"
18	Homelight Oil Co. (Bloomfield)	Lamp	642,060	Batoum
	GRIMSBY—			
14	J. Sutcliffe and Son ..	Lub.	160	Antwerp
14	" ..	"	60	"
15	" ..	"	1,980	"
	HARWICH—			
12	D. Howard ..	"	260	"
14	" ..	"	20	"
	HULL—			
12	T. Wilson Sons and Co. ..	"	15,360	New York
12	British Petroleum Co. (Kura)	R. Lamp	905,000	Kustendje
12	" ..	Resid.	2,240	"
12	W. Gilyott and Co. ...	Lub.	17,200	New York
21/4	Wilsons and N.E. Railway Shipping Co.	"	750	Antwerp
14	T. Wilson, Sons and Co. ..	"	240	Riga
14	Wilsons and N.E. Railway Shipping Co.	"	400	Hamburg
14	Hull & Netherlands S.S. Co.	Tar Oil	3,200	Rotterdam
14	Wilsons and N.E. Railway Shipping Co.	Lub.	1,000	Antwerp
15	T. Wilson, Sons and Co. ..	"	2,400	Trieste
18	W. Gilyott and Co. ...	"	13,160	New York
18	Hull & Netherlands S.S. Co.	Tar Oil	1,600	Rotterdam
18	Wilsons and N.E. Railway	Lub.	1,000	Antwerp
	MANCHESTER—			
12	George B. Taylor ..	"	480	Hamburg
13	Anglo-American Oil Co. (Potomac)	Lamp	1,298,430	Philadel.
13	J. T. Fletcher and Co. ..	Lub. Gr.	200	Antwerp
13	" ..	Lub.	550	"
13	" ..	"	520	"
14	Pickford's, Ltd. ..	Lub. Oil and Paste	70	Hamburg
15	Mordaunt Bros. ..	Lub.	2,200	New York
18	Liverpool Storage Co. ..	"	35,600	"
18	Meade-King, Robinson & Co.	"	1,600	"
18	Bramwell, Fern and Co. ..	"	1,830	"
18	Liverpool Warehousing Co.	"	125,520	"
18	J. Brooks and Co. ..	"	40	"
	MIDDLESBRO'—			
15	J. J. Sutherland ..	"	560	Antwerp
	NEWCASTLE—			
14	Tyne-Tees Steamship Co. ..	"	330	Hamburg
	NEWPORT—			
14	A. J. T. Goss ..	"	2,000	New York
14	G. O. Dibble and Co. ..	"	6,000	"
16	A. J. T. Goss ..	"	1,000	"
	SWANSEA—			
14	Richards, Turpin, and Co...	"	7,200	"
18	" ..	"	2,400	"
	DUNDEE—			
12	D. Alexander and Sons ..	Lamp	1,600	Hamburg
15	A. B. Fleming and Co. ..	Lub.	1,995	Riga
	GLASGOW—			
12	Clyde Shipping Co. ...	Lub. Gr.	110	Antwerp
18	Anchor Line ..	Lub.	19,100	New York
	GRANGEMOUTH—			
15	W. Graham-Yooll and Co. ...	Lamp	4,000	Hamburg
15	J. Currie and Co. ..	"	5,700	"
15	" ..	Lub.	2,400	"
16	To Order ..	"	480	Antwerp
	LEITH—			
14	W. Graham-Yooll and Co...	Lamp	4,050	Hamburg
14	Geo. Gibson and Co. ..	Lub.	400	Antwerp
	BELFAST—			
14	J. C. Pinkerton and Co. ..	"	100	Hamburg
18	G. Heyn and Sons ..	"	1,000	Riga
	Total for the Week ..		8,896,623	
	Total for the Fortnight ..		14,726,608	

The Petroleum Review.

By PAUL DVORKOVITZ.

Vol. XVIII. (New Series.)

JUNE 6TH, 1908.

No. 426.

THE PETROLEUM REVIEW:

The ANNUAL SUBSCRIPTION for both English and Foreign readers is 26s., including Postage. Single Copies may be had at the offices at 1s.

The Editor would esteem it a favour if readers, when communicating with the various firms advertising in our pages, would mention the "Review."

Contributions upon items of interest are always welcomed from subscribers, but in each case these should be accompanied with the name and address of the sender, not necessarily for publication.

Editorial Notes.

Without a doubt, the Roumanian **Progressive Roumania.** petroleum industry is progressing in a manner most remarkable. When the figures for the operations during 1907 were published, it will be remembered that a record was established from every point of view, but now that many official details are forthcoming which deal with the development of the industry during the first quarter of this year, quite a new record is seen to have been established. The production for the first three months of the year has most substantially advanced, while the output of the refineries has far surpassed all expectations, the increase being considerably over thirty per cent. upon the figures for the corresponding period of last year. Then again both the home trade and the export movement is in a wonderfully prosperous state, the increase from the record established a year ago being quite forty per cent in each case. Upon another page we publish a number of figures relative to the petroleum industry of Roumania, and these statistics are indisputable evidence of the march of progress which is to-day seen upon every hand in that country. We would commend the serious attention of our readers to those details which speak of the success achieved far louder than words.

The statistics of the petroleum import **Increasing Petroleum Imports.** trade of the United Kingdom for the past month certainly shew a most healthy tone, constituting as they do a record for the present year. In all there were imported over 30,000,000 gallons, of which quantity illuminating oil shipments amounted to over 50 per cent. The motor spirit trade is also looking up wonderfully well, and for the month, this country imported no less than 5,000,000 gallons. The imports of lubricating oil, and also those of gas oil shew increases, and so all round we may look upon the past month as having been one of great activity in the oil importing trade and auguring very well for the English oil trade as a whole.

The Galician Atmosphere Clearing.

There are signs indicating that the Galician petroleum industry is at last going to emerge from the chaotic condition into which it was thrown by the dissolution of the Petrolea Co. on the one hand and the refiners' cartel on the other. Owing to rapidly increasing production and the want of storage accommodation, the price of crude oil has lately ranged from 11 to 14 francs per ton, for the Olex Co., the export organisation of the refiners, which has maintained its existence, has been unable to market abroad the whole of the surplus production. The Galician exporters have been the only ones to decline all agreements with the Standard Oil Co. and to decide to fight it, and the result, as will be seen, is far from satisfactory. However, a new organisation is now in course of formation, intended to unite the crude oil producers, under the title of the Producers' Union and the promoters of the organisation are now in negotiation with the Union Bank of Vienna to provide the funds for the work to be carried on. The refiners are likewise continuing their efforts to bring about a renewal of the cartel, and the recent rise in petroleum shares on the Vienna Exchange may be taken as an indication that a satisfactory solution of the difficulties is at hand. Should the producers succeed in forming their union, the refiners will be compelled to combine quickly in order to prevent any excessive advance in crude oil prices.

American Petroleum Exports for April.

The statistics of the exports of petroleum products from America during April shew that this now important branch of commerce continues to experience very active times. While the April figures were somewhat behind those of March, the hundred million gallon mark was easily passed, the total quantities exported being 111,600,000 gallons, and were valued at almost 9,000,000 dollars. The fiscal year closes at June, but if we take the ten months so far run, we shall find that when these are compared with those for the corresponding period a year ago, they display a remarkable increase of over 117,000,000 gallons, or a gain in value of over 13,000,000 dollars. The illuminating oil trade continues to be exceedingly brisk, and the exports of illuminating oil for April formed eighty per cent. of the total.

Another Reduction in Petrol Prices.

A second reduction in the retail price of petrol within a few weeks is sufficient to suggest to the thinking mind that this important branch of the petroleum trade has now settled down to a normal state, and that the days when the average user of this spirit could with reason cry out about the constant increases, are now past. The remarkable growth of the consumption of motor spirit in this country brought about something approaching a crisis in the matter of supplying the demand, and for a time complaints were

loud and strong. But now matters have now righted themselves, and there is every reason to believe that at all events petrol will remain at its present retail level for a long time to come. If only many of the drastic and quite unnecessary restrictions could be removed, and the exceedingly high distributing charges minimised, we might see still further reductions, but in the absence of change in this respect, it may be taken that the rock bottom figures have been reached. One thing the reduced prices have brought with them has been that of silencing the mouths of those prophets of ill who for a long time seriously endeavoured to injure the trade in motor spirit by pushing forward the claims of a comparatively unknown and certainly a very inferior kind of fuel.

LONDON OIL SHARE MARKET.

FRIDAY, JUNE 5TH, 1908.

The Oil Share group on the London Stock Exchange continues to be absolutely lifeless, with the exception of Californian issues in which some good buying orders have been received, but owing to the general revival that has taken place in most departments and the reduction of the Bank Rate to $2\frac{1}{2}$ per cent., there is a tendency on the part of the public to pick up cheap Industrials, so that we trust we shall soon be able to report a movement in Oil Shares.

Current prices on the day following our last issue are as follows:—

Anglo-Russian Petroleum $0-\frac{1}{16}$, Assam Oil, Ltd., $\frac{7}{16}-\frac{9}{16}$, Baku Ordinary 1s. to 1s. 6d., Baku Preference $\frac{3}{8}-\frac{5}{8}$, Bibi-Eybats $\frac{5}{16}-\frac{7}{16}$, Californian Oilfields $5\frac{3}{8}-5\frac{5}{8}$, Californian Five Per Cent. First Mortgage Debentures 98-101, Californian Refineries $\frac{1}{4}-\frac{3}{4}$, European Petroleum $\frac{1}{16}-\frac{3}{16}$, European First Mortgage Debentures 69-73, European Second Mortgage Debentures 35-38, Russian Ordinary 2s. to 3s., Russian Six and a-half Per Cent. Preference 2s. to 3s., Russian Five and a-half Per Cent. Debentures 74-77, Russian Six Per Cent. "B" Debentures 39-44, Schibaieff Ordinary 1s. 6d. to 2s. 6d., Schibaieff Preference $\frac{3}{4}-1$, Spies Petroleum, $\frac{7}{16}-\frac{1}{2}$, Shell Transport Ordinary 44s. 6d. to 45s. 6d., Shell Transport Preference $9\frac{3}{4}-10\frac{1}{4}$.

The only alterations to record are a decline in Shell Transport Ordinary on the 26th ult. to 43s. 6d. to 44s. 6d., thus shewing a loss of 1s. per share, 3d. of which, however, was subsequently recovered on the 1st inst., when the closing price was 43s. 9d. to 44s. 9d. Californian Oilfields advanced $\frac{1}{4}$ per cent. on the 3rd inst. to $5\frac{5}{8}-5\frac{7}{8}$, while the Debentures improved a point at 99-102, and on the next day the former rose another $\frac{1}{8}$ to $5\frac{3}{4}-6$.

At the End-May Settlement, which commenced on the 27th ult., there was only one rise to report, namely, that of $1\frac{1}{2}$ d. per share in Anglo-Russian Petroleum at $\frac{1}{32}$; but declines are registered as follows:—

Californian Oilfields, $\frac{1}{4}$ at $5\frac{1}{2}$, Russian Ordinary, 3d. at $\frac{1}{8}$, Schibaieff Preference, $\frac{1}{16}$ at $\frac{7}{8}$, and Shell Transport, 3d. at 44s.

No change occurred in either Baku Ordinary and Preference at $\frac{1}{16}$ and $\frac{1}{8}$ respectively, or in Russian Preference at 3s., Schibaieff Ordinary at 2s., and Spies at 9s.

BAKU PRODUCTION DURING APRIL.

The total production of crude oil at the Baku oil fields during April (o.s.) amounted to 38,462,000 poods.

The production of the leading firms in April was as under:—

	Poods.
Nobel Bros.	6,000,000
Caspian and Black Sea Society	2,700,000
Baku Naphtha Co.	2,000,000
Mantascheff and Co.	2,000,000
Caspian Society.	1,900,000
Moscow-Caucasian Co.	1,200,000
Nagieff	1,200,000
Pitoeff and Co.	1,200,000
Aramazd Co.	1,100,000
Russian Naphtha Co.	900,000
Zoubaloff	900,000
Bibi-Eybat Petroleum Co., Ltd.	900,000
Russian Petroleum and Liquid Fuel Co., Ltd.	900,000
Schibaieff Petroleum Co., Ltd.	800,000
Baku Russian Petroleum Co., Ltd.	800,000
Naftalan Co.	600,000
Neft Co.	600,000
Ter-Akopoff	600,000
Shikhovo Co.	500,000
European Petroleum Co., Ltd.	500,000
Russian Bebe-Aibat Co.	500,000

THE BAKU RUSSIAN PETROLEUM CO., LTD.

MEETING OF CREDITORS.

A meeting of creditors of the Baku Russian Petroleum Co., Ltd., took place at Baku on Sunday week, when fifty creditors were present. The total claims made against the company amounted to 4,000,000 roubles. The largest creditors are:—

	Roubles.
Russian Petroleum & Liquid Fuel Co., Ltd.	295,311
Bichovsky, K. V.	81,033
A. F. Bering	34,738
L. E. Itzkovitch	159,448
M. T. Lianozoff	100,107
M. Monkhtaroff	79,466
M. Nagieff	108,236
Mazout Co.	179,981
Stucken & Co.	179,828
Lev and Sons	89,316
T. B. Lboff and Sons	60,000
Zacharoff and Skrepinsky	55,044
Government (advance)	490,640
" (taxes)	47,448
" (royalties)	208,842
Debenture Holders in London	799,576
Sundry Creditors in London	350,000
Employés and Workmen, about	60,000
H. Z. A. Tagieff	12,516

The following gentlemen were appointed administrators:—F. F. Skrepinsky, M. Mukhtaroff, Stucken and Co., Howden (Oleum) and Tweed (debenture holders in London).

It was decided that the administrators should receive five per cent. of the amounts paid to the creditors, or a round sum of £20,000.

No representative of the shareholders was appointed as administrator.

SITUATION WANTED.

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The Petroleum Trade of Batoum during 1907.

IMPORTANT CONSULAR REPORT.

Mr. Consul Stevens has just published his annual report upon the trade and commerce of Batoum for the past year, and, as usual, this official review is of a most interesting nature. At the outset he remarks that, although the trade statistical tables for the year 1907 at the port of Batoum, on the whole, shew an improvement in comparison with the year 1906, yet the apparent advance does not imply successful trading. One hundred and seventy-five tank steamers loaded at Batoum in 1907. Of these, only 41 were under the British flag. He presumes the small number of British tank steamers that visited this port during the year is to be accounted for by better freights from other oil exporting ports, and the unprecedented activity in shipments of oil from Roumania, which attracted a large number of this class of boat. The foreign petroleum trade of the Caucasus has, he says, seen its best days. Influenced by a combine of the more important producers, prices of the raw material are maintained at such a high level, and the demand for petroleum products for home consumption is so great that the present rate of production is not capable of meeting the requirements of the Russian markets, and still less of giving a surplus for exports. Unfortunately, there is no likelihood of the production increasing to the extent necessary to allow of a sufficient margin of oil for purposes of export, until the injurious effects of the trust, as stated above, are removed, and the industrial disturbances at Baku completely cease. On the other hand, so far as the general employment at the wells is concerned, the present record is certainly very discouraging. Wages and the conditions of life amongst workmen at the oil fields still leave much to be desired; and individual strikes constantly occur. The oil industry is exposed to much injury in consequence, and the British companies are from time to time gravely affected by the disputes.

The arrivals of oils at Batoum, and the exports therefrom for the past six years are as under :—

EXPORTS.

			Poods.	Imperial Gallons.
1902	..	..	80,475.685	.. 289 713,582
1903	..	..	77,128,348	.. 277,662,053
1904	..	..	77,095,527	.. 277,543,897
1905	..	..	36,763.124	.. 132,347,246
1906	..	..	30,999,197	.. 111,597,609
1907	..	..	37,073,586	.. 133,464,912

The above statistics shew that the improvement in the petroleum trade last year was insignificant, and the outlook for the future still continues to be gloomy. The stock of petroleum products at Batoum on January 1st, 1907, was 13,825,764 imperial gallons; 142,084,037 imperial gallons were conveyed from Baku to Batoum either by rail or through the pipe line which brought the total for the year up to 155,909,801 imperial gallons. During the year 133,464,912 imperial gallons were exported to foreign countries and shipped to Russia, leaving a balance of 22,318,401 imperial gallons, which represents the quantity of petroleum products locally consumed and in stock on January 1st, 1908. Of course the bulk of this latter quantity would be stock. The number of cases and cans of kerosene shipped from Batoum in 1907 was 2,104,078 and 1,944,765 respectively, as compared with 9,881,096 cases and 5,068,180 cases three years previously.

Proceeding, Mr. Stevens says :—The pipe line between Baku and Batoum worked without a hitch during the year. The only objectionable feature in connection with the enterprise now is, that in view of the decrease in the exports of illuminating oils from Batoum, there is not sufficient oil to keep the pipe line and its costly machinery continually at work, and the undertaking is, therefore, not as remunerative to the State Railway as was anticipated, when the scheme for laying the line first came under the consideration of Russian Government engineers. Besides this, merchants using the pipe line are subjected to a loss of two per cent. of kerosene which the railway authorities deduct for leakages. Considerable loss of oil is also experienced through the tapping of the line by natives, who in many cases have been caught clandestinely drawing off oil. At Elizavetpol, for instance, quite recently a gigantic fraud was discovered. The town having only consumed one tank car of oil during 1907, an inquiry was instituted, which elicited the facts that the pipe line had been

ARRIVALS.

			Poods.	Imperial Gallons.
1902	..	..	77,229,357	.. 278,025,685
1903	..	..	81,081,942	.. 291,854,991
1904	..	..	80,486,885	.. 290,752,766
1905	..	..	25,743,344	.. 92,676,038
1906	..	..	31,607,655	.. 113,667,558
1907	..	..	39,467,788	.. 142,084,037

The arrivals of petroleum products brought at Batoum by rail and through the pipe line during the year were as follows (in gallons) :—

Month.	Petroleum.	Engine Oil.	Solar Oil.	Mazout.	Crude Oil.	Spindle Oil.	Cylinder Oil.	Total.
1907—								
January	.. 9,325,069	1,366,697	276,340	739,256	—	355,219	63,734	12,126,315
February	.. 8,647,787	1,703,988	204,174	684,182	—	145,091	25,290	11,410,512
March	.. 17,031,211	1,651,352	80,377	444,201	—	403,776	167,246	19,778,163
April	.. 10,882,995	1,963,465	28,184	1,158,622	—	145,422	70,909	14,249,597
May	.. 8,029,202	2,030,544	130,002	664,158	—	294,984	64,235	11,213,125
June	.. 4,893,235	1,237,600	181,886	827,507	—	147,967	41,544	7,329,739
July	.. 6,849,418	1,501,643	289,519	329,166	—	120,474	53,165	9,143,385
August	.. 4,298,364	2,722,813	215,961	589,724	—	349,060	53,118	8,229,040
September	.. 3,278,912	2,333,236	589,316	916,481	68,198	243,875	28,350	7,458,368
October	.. 7,705,073	1,963,002	613,930	801,158	37,638	522,576	126,500	11,769,877
November	.. 12,551,364	1,863,076	213,358	1,080,764	—	371,160	103,248	16,182,970
December	.. 9,921,654	1,972,580	294,902	761,346	—	237,510	4,914	13,192,906

tapped some miles to the east of the town, that a systematic robbery of kerosene had been taking place all the year, during which as many as from 10 to 12 cart loads of kerosene were nightly drawn out of the pipe and conveyed to the town for disposal in retail during the day.

The export of petroleum products from Batoum during the year amounted to 597,961 tons, valued at £2,403,436, as compared with 470,217 tons in 1906. The import of tin plates amounted to 8,871 tons during the year, an increase of 5,115 tons over the figures of 1906.

The exports of petroleum products from Batoum during the year, in months, are given in the following table (in imperial gallons):—

1907—	Kerosene. In Cases.	In Bulk.	In Barrels.	Total.
January ..	2,572,689	7,557,897	54,720	10,184,806
February ..	606,495	9,514,872	37,440	10,157,807
March ..	987,130	16,413,800	36,986	17,437,916
April ..	2,604,034	8,719,441	40,896	11,364,371
May ..	1,669,669	12,986,982	159,148	14,815,799
June ..	1,139,378	9,441,824	74,882	10,656,084
July ..	1,496,361	8,820,417	52,876	10,369,654
August ..	1,602,828	9,355,734	136,397	11,094,959
September..	2,160,450	8,236,901	191,059	10,558,410
October ..	1,616,996	5,186,556	84,960	6,888,512
November..	1,708,081	7,945,067	204,480	9,857,628
December..	1,771,338	8,194,002	173,606	10,048,966
Total ..	19,933,969	112,283,493	1,247,450	133,464,912

REPORTED DISCOVERY OF THE MEXICAN GULF OIL SPRING.

It is reported that the source of the great oil pool which has long been known to exist in the Gulf of Mexico has finally been discovered. It is known that there is at least one outlet for the oil located a few hundred feet off the coast of Padre Island, about 75 miles north of Point Isabel. The oil which constantly pours from this subterranean spring comes to the surface and if the wind is strong it is swept 30 to 50 miles into the gulf where it frequently spreads over the surface, covering an area of water six to eight miles square. Owing to the variations of the wind and the fact that the oil-covered surface was frequently completely detached from the stream which formed its source, it has been impossible to trace the origin of the surface oil upon the Gulf. The existence of this oil pool has long been known to navigators of Gulf waters and in time of storm coastwise vessels, if they happen to be in that locality, seek to find the placid waters of the oil pool and there remain until the tumultuous sea which rages around the oil-covered area of water quiets down.

The discovery of the flowing oil spring near the shore of Padre Island was made, says the *Oil, Paint and Drug Reporter's* own correspondent, a few days ago by a Mexican who formerly worked in the oil fields of Eastern Texas. He divulged his secret to a few friends and they set about to get control of the land adjacent to the spring, when the discovery was made. It was found, however, that the State of Texas owns the land, and as no price has been set upon it, it cannot be bought except by competitive bids. The news of the discovery spread to Point Isabel and other places in the lower Rio Grande

border region. Mr. A. Heywood, who owns many oil wells in Eastern Texas and Louisiana, was so much interested in the reported find that he sent Prof. W. F. Cummins, a geological expert, to investigate the situation on the island.

ROUMANIAN PRODUCTION DURING APRIL.

According to provisional figures to hand the total production of crude oil at the Roumanian oil fields in April amounted to 91,591 tons. To this has to be added the production of some smaller firms, who have not made their returns, and which will bring the total for April up to about 94,000 tons, against 97,366 tons in March.

The production of the various fields in April was as under:—

Prahova District—					Tons.
Bustenari ..	..	..	..	..	38,460
Campina-Poiana ..	..	..	..	..	21,727
Moreni ..	..	..	..	..	24,135
Baicoi-Tintea ..	..	..	..	..	3,297
Other fields ..	..	..	..	..	667
Total for Prahova ..	..	..	..	..	88,286
Dambovitza district ..	..	..	..	..	1,955
Buzeu ..	..	..	..	..	559
Bacau ..	..	..	..	..	891
Total ..	..	..	..	..	91,691

ENGLISH PATENTS.

(Specially contributed by Messrs. EDWARD EVANS & Co. Consulting Engineers, Chartered Patent Agents, and Enrolled Patent Attorneys, of the United States, of 27, Chancery Lane, London, W.C.)

APPLICATIONS PUBLISHED IN GREAT BRITAIN.

An Improved Filter for Oil and the Like.—John Garside, 103, Halifax Road, Ripponden, Yorkshire, and Edwin Garside, 5, Small Lees Road, Ripponden, Yorkshire. No. 8978 of 1907.

This relates to a filter for oil and the like, comprising the combination of a holder filled with sawdust in the centre and blotting-paper, sponge, cloth, or the like at the top and bottom, a sloping tray and grid, a threaded central tube having apertures at its upper end and a valve.

Improvements relating to the Treatment of Oils.—Carl Dreymann, of 21, Via Montessoglio, Turin, Italy. No. 9766 of 1907.

This relates to the conversion of drying and half-drying oils into non-drying oils and oleic acids characterised by the fact that the oils in order to admit of their employment in the soap and textile industries in opposition to the manufacture of varnishes, are heated for from 15 minutes to two hours without the addition of a drying medium and with the exclusion of air to 200° to 350° C. The process may also be employed for obtaining thick lubricating oils from mineral oils.

Improvements in Incandescent Petroleum Lamps.—

Alexander Meissner and Joseph Danischewski, both of 3, Newsky, St. Petersburg, Russia. No. 7497 of 1907.

This relates to a thermostatic device of the kind which, when heated by the flame used to heat the vaporiser, automatically opens the valves for the supply of the liquid fuel to the vaporiser and comprises a plate formed of two layers each of different metal, the two layers having been attached together in such a manner that at normal temperatures, owing to the difference of their co-efficients of expansion they cause the plate to assume a curved form. By mounting the plate between a stop and a valve actuating member, this latter is at normal temperatures caused to retain the valve closed. On the plate becoming heated, it loses its curved form and becomes flat so that the pressure is removed from the valve actuating member. The special form of this composite plate permits a number of plates to be used arranged in series so that their several actions have a cumulative effect so that a considerable force may be exerted thereby so as to render the device particularly reliable in action.

THE PETROLEUM INDUSTRY OF ITALY.

RECENT DEVELOPMENTS.

According to a recently published report of the German Consul-General, in Genoa, a considerable development has taken place in the petroleum industry of Italy during recent years. Italy possesses three principal oil districts. The largest oil field is in Emilia, in the provinces of Piacenza and Parma; a second oil field is in the Livi Valley, in the Province of Chieti; while a third is in Sicily. The first of these oil fields is by far the most important. Boring there began as far back as 1860, but the development of the field on an industrial scale commenced only in 1880. A refinery was established in Borgo San Dominio, which treated the crude oil from Salsomaggiore, Vellei and Montechino.

In 1881 this refinery had already an output of 600 tons, and other refineries sprang up at Fiorenzuola and Milan. In 1903 a certain Mr. Marchand, from Dunkirk, formed a French company with a capital of 1,200,000 liras.

consumption of petroleum in Italy works out at only $2\frac{1}{4}$ kilos. per head of population, against $17\frac{3}{4}$ kilos. in Germany, and $29\frac{3}{4}$ kilos. in Holland.

The satisfactory position of Italian finances and the desire to provide for the poor masses a cheap illuminant has induced the Government to reduce the import duty on petroleum from April 1st, 1908, from 48 liras per 100 kilos. to 24 liras gold, *i.e.*, by half. It is questionable, however, whether the expectation based on this reduction, that in a few years the consumption would increase to such an extent that the Government would receive the same amount of revenue as before will be realised. The duty of 24 liras per 100 kilos., is still very high, and under such conditions, petroleum cannot be used for other than illuminating purposes. A further reduction in the import duty to 16 liras per 100 kilos. will take place on January 1st, 1911, in accordance with



A VIEW IN ITALY'S MOST IMPORTANT FIELD.

1906. 1907.

The area of the properties taken up by the company was about 4,700 hectares, and in 1903 they had a production of 800 tons. In the following year the output was doubled, and in 1905 it reached 2,000 tons. By that time only one-ninth part of the property was in exploitation.

The great industrial activity which manifested itself in Italy in 1906, extended also to the petroleum industry. A company was then formed in Genoa with a capital of 15,000,000 liras, which took over the property of the French company. The production in 1906 was estimated at 20,000, and in 1907 was expected to be further increased. This production, however, does not yet cover even one-tenth part of the petroleum consumption in Italy.

Owing to the high tax on petroleum in Italy, the consumption there is comparatively small, and, in spite of recent economic development in the country, no improvement is to be noted in this direction, but on the contrary, there is a set back to be recorded. In 1905 only 65,657 tons of petroleum were imported against 68,146 tons in 1905. According to recently published data, the

the Commercial Treaty entered into with Russia. In consequence of the reduction in import duty, the retail prices of illuminating oil have declined by 20 centesimi per litre, so that on an average, refined petroleum can now be bought at 50 centesimi per litre.

During the last two years the following quantities of oil were issued from the tank storage installations at Genoa:

			1906. Tons.	1907. Tons.
American Refined Petroleum	..	..	2,740	3,565
Russian	..	..	845	780
Roumanian	..	..	42	10
Galician	..	..	288	735
Total	..	..	3,915	5,090

The Romano-American Company have changed their attitude in the Roumanian home trade with remarkable suddenness. Whilst until quite recently they have been offering a sharp competition, and have expended large amounts in creating retail selling installations, they have now given up the fight and entirely suppressed their distributing organisation and discharged the staff of this branch. The *Moniteur du Petrole Roumain*, from whom we gather this information, even asserts that Mr. Oscar Gunkel, the head of this department, is shortly to leave Roumania for America.

THE PETROLEUM TRADE OF GERMANY DURING APRIL.

The following are the figures of the imports of petroleum products into Germany in April:—

	Tons.
Illuminating oil	61,054
Lubricating oil	14,236
Crude benzine	6,174
Refined benzine	680
Heavy benzine	45
Crude oil	3,165
Residuals	59
Gas oil	3,467
Patent turpentine and other mixtures	69
Total	88,949

The imports from the various producing countries were as under:—

U.S.A.	59,509
Austria-Hungary	15,676
Russia	7,508
Dutch India	3,603
Roumania	2,333
Other countries	120
Total	88,749

The exports of various petroleum products from Germany in April amounted to 1,483 tons, of which 871 tons were lubricating oils.

THE ROUMANIAN HOME TRADE.

The work of organising the sale of illuminating oil in the Roumanian home market under the new law continues. Several meetings of refiners have been held, and an agreement is expected to be arrived at shortly. Practically all the refiners have decided in favour of distribution direct to the consumers. The retail price will be fixed between 20 and 25 centimes per litre as against 35 and 45 centimes charged by the old cartel.

The Government propose that 140 depôts shall be established at the various railway stations, and these, together with the existing depôts of the Steaua Romana, Romano-American and others, shall be handed over to the joint distributing organisation to be created.

The refiners cartel expired on the 30th of April, and as the new law does not come into force before October, the Steaua Romana has addressed a circular to the refiners offering to continue to sell their oil on commission in the meantime, and also inviting them to ultimately join the new distributing company which the Steaua has formed in conjunction with the Aurora Co.

As regards the proportional participation of the various refineries, this will be fixed, not according to the actual output, but according to the capacity of the plant of each refinery.

Mr. Halaceanu, acting on behalf of the Government, is working independently of the refiners' committee in collecting the material for deciding the question of the proportional participation.

It will be remembered that under the new law the refineries are divided into three classes—refineries with a capacity above 40,000 tons per annum receive an ordinary share; those between 10,000 and 40,000 per annum receive proportionately double than the refiners above

40,000 tons; and those under 10,000 tons will receive a treble share against the refiners of the first class. On the basis of the above calculation, the total home trade would approximately be allotted in the following manner:—

REFINERIES OF THE FIRST CLASS.

	Probable Capacity of the Refinery. Tons.	Probable Participation in Home Trade in Illum. Oil. Tons.
Steaua Romana	550,000	9,000
Aurora Co.	350,000	6,000
Vega Co.	300,000	5,000
Romano-American Co.	200,000	3,000
Aquila Franco-Romana Co.	120,000	2,000
Trajan Co.	70,000	1,000
Colombia Co.	60,000	1,000
Total	1,650,000	27,000

REFINERIES OF THE SECOND CLASS.

Astra Co.	35,000	1,500
Campeanu	30,000	1,250
Predinger	25,000	1,100
Goldstern	25,000	1,100
Grigorescu	20,000	900
Parascheva	20,000	900
Total	155,000	6,750

REFINERIES OF THE THIRD CLASS.

Various Refineries	50,000	6,000
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Summarising the above, we get:—

First Class	1,650,000	27,000
Second Class	155,000	6,750
Third Class	50,000	6,000
Total	1,853,000	39,750

The *Moniteur du Petrole Roumain*, from which these figures are taken, is careful to state that they must be considered as a vague indication of the probable outcome of the new conditions.

THE ANGLO-MEXICAN OILFIELDS, LIMITED.

According to cable advice received from the manager at Pichucalco, the depth reached in No. 1 well is 682 feet, being an increase of 236 feet during the four weeks ended the 30th ult.: "The formation was soft grey shale from 446 feet, and during the last week a bed of soft black sandrock has been entered. Drilling with the second rig was commenced on May 2, and a depth of 331 feet has been attained during the month. The formation is soft grey shale."

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The Baku Petroleum Industry during 1907.

AN INTERESTING REVIEW.

Mr. Vice-Consul McDonell is about to issue his yearly report upon the trade of Baku during 1907. The REVIEW is in a position to give the chief points of that report before it is officially published. Mr. McDonell dwells at length upon the petroleum industry, pointing out that during the year trade compared very favourably with the two previous years, but it cannot be said that working has been continued under anything like normal or uninterrupted conditions. Everything in Baku, of course, depends upon the prosperity of the oil industry, and, adds the Vice-Consul, there are undoubtedly great openings in mineral wealth.

The production in 1907 of mineral oil products increased by some 102,000,000 imperial gallons as compared with the year 1906, but the output by no means reached what may be termed normal figures. The all-prevailing labour question was to a great extent answerable for this condition of things. Since it is a question which has such vital bearing on the outlook for the present year, before going any further I should like to make a few remarks in special reference to this point.

As mentioned above, individual strikes and strikes of groups of firms have been of very frequent occurrence, and there is probably no firm here which has not been through its period of disorder in this respect. Until recently the result was invariably that the masters ceded to the men. Lately, however, producers have been holding out, and have not only refused to comply with the exorbitant demands of the men, but, in contrast to what was often the case on previous occasions, have declined to pay them for the time they were on strike. A notable instance of this kind was when the Caspian Society held out for 68 days, the men eventually resuming work without receiving any concessions or pay for the time they were on strike. Other firms have now followed this example, and the effect has been very encouraging. Another factor which is tending to solve the labour question to a great degree is, that the working classes are being drawn into the hands of a better constituted and more serious organisation, which itself is beginning to learn some of the fundamental laws of economics: one of which is that a higher wage is by no

means a remedy for all evils. The wages of the working man have in some cases been increased 50 per cent. during the last two years, consequently the price of living has risen enormously, and in some cases in a greater proportion than the enhanced pay of the working man. With these two factors at work, viz., the steadfastness of the masters and the awakening of the men, the outlook for the year 1908 appears much more hopeful and, I think, we may confidently look forward to a year with many fewer economic strikes than in 1907.

Kerosene for export has but slightly increased. The shipments of kerosene into the interior of Russia increased in 1907 by 57,000,000 imperial gallons as against those of the preceding year, and in comparison with the output of crude for the year these shipments were good. The price obtained was also good, viz., 2 copecs per pood, or about $\frac{1}{4}$ d. per gal'lon, in excess

of the price at which kerosene was exported from the Caucasus.

A considerable advance took place in the shipments of petroleum residuum to Russia, which apparently was out of all proportion to the increase in the production of crude oil. A great deal of



A VIEW OF BAKU SHEWING TANKERS ALONGSIDE THE WHARVES.

residuum was shipped forward to replenish the stocks in the interior of Russia, seeing that the distributing firms, in view of the contemplated strike of the mercantile fleet on the Caspian Sea and the Volga, were desirous of holding big stocks on the opening of the 1908 navigation. Further new regulations have been issued, enjoining railways employing liquid fuel to maintain large stocks so as to cover themselves in the event of a strike being declared at the oil fields. Owing to the resumption of work in many of the factories in Russia, there probably was a greater demand for liquid fuel in Russia in 1907, but against this many factories went over to coal on account of the high prices of oil and the uncertainty of delivery; this is evidenced by the coal consumption statistics for 1907, which shew that the equivalent of over 60,000,000 poods of liquid fuel (216,000,000 imperial gallons) were displaced by coal.

The decrease in the exports of lubricating oils to Europe was due to the ruling high prices in 1907 for crude and residuum, together with the competition of

American oil in European markets, both of which circumstances rendered this branch of the industry not quite so profitable as it used to be. Russian lubricating oils, however, still hold their own for quality in all markets, and continue to be very profitable to the Baku oil industry. Another factor which tended to slightly reduce the general output of lubricating oils was that one or two refineries manufacturing considerable quantities of lubricating oil were compelled to shut down, and other refiners did not increase their output.

The increase of only 102,000,000 imperial gallons in the production of crude oil for the year 1907 is disappointing, and is accounted for by the strike, and by the few new wells which came into production during the period under review, a great number of the 237 wells entered up as new wells being old wells damaged during the disturbances, and repaired in 1906.

As will be seen from the figures in the following tables many new wells were started during the year, most of which should, under ordinary circumstances, come into operation in 1908. An appreciable increase of production is therefore probable during the present year, added to which, the use of natural gas for the purposes of fuel is becoming more general, and will, doubtless, considerably curtail the large quantities of crude at present consumed as fuel.

Prices were abnormally high all through the year; shortness of production, enhanced wages and consequent higher exploitation expenses were responsible for this condition of things, besides which certain large firms kept prices up to suit their own ends.

The shipments and deliveries of mineral oil products from Baku for the years 1904-07 were as under:—

	1904. Imp. galls.	1905. Imp. galls.	1906. Imp. gall.	1907. Imp. galls.
Illuminating oils—				
Exported ..	268,277,580	81,419,353	88,417,120	103,771,740
To Caucasus..	6,917,231	5,406,412	7,201,278	8,173,239
„ Russia ..	263,510,698	165,140,075	147,234,186	204,582,002
„ Persia and Transcaspia	11,195,845	10,387,020	11,569,720	10,081,307
By road ..	3,211,290	2,859,160	3,081,503	3,142,145
Lubricating oils—				
Exported ..	34,907,624	10,849,369	33,852,802	28,830,224
To Caucasus..	610,214	239,962	463,226	330,867
„ Russia ..	19,158,372	16,445,754	19,099,075	20,909,881
„ Persia and Transcaspia	257,609	277,564	374,717	59,432
By road ..	813,931	608,044	623,236	856,519

	1904. Imp. galls.	1905. Imp. galls.	1906. Imp. galls.	1907. Imp. galls.
Residuum—				
Exported ..	8,182,174	2,920,820	3,522,604	790,200
To Caucasus..	51,751,717	36,468,619	11,510,478	1,493,467
„ Russia ..	153,948,175	872,278,553	679,766,612	856,435,688
„ Persia and Transcaspia	69,428,275	41,519,808	36,635,281	38,867,054
By road ..	6,049,472	4,418,255	3,957,320	3,231,702

The total quantities of petroleum products exported and shipped from Baku in the years 1906-07 were as under:—

	1906. Imp. galls.	1907. Imp. galls.
Kerosene ..	257,503,807	329,750,433
Lubricating oils..	54,413,056	50,986,923
Residuum ..	735,402,295	900,820,111
Crude oil..	109,937,713	128,663,507
Various products	5,406,159	17,060,624

The crude production for the past four years has been:—

	1904. Imp. galls.	1905. Imp. galls.	1906. Imp. galls.	1907. Imp. galls.
Total..	2,210,815,598	1,476,130,486	1,611,734,149	1,713,606,203

The stocks and distribution of products for the year are seen from the following table:—

	Imp. galls.
Stocks on January 1st, 1907 ..	284,760,000
Production, 1907 ..	1,713,600,000
Total ..	1,998,360,000
Total exports ..	1,427,221,602
Loss and fuel, &c. ..	400,198,398
Approximate stocks ..	170,640,000
December 31st, 1907 ..	1,998,360,000

The approximate average prices for the past four years have been:—

	1904. Copecs	1905. Copecs.	1906. Copecs.	1907. Copecs.
Crude ..	14½	19½	25½	27¾
Kerosene export ..	20½	22	28½	34
„ Russia ..	—	—	—	36
Residuum..	15	21¾	27½	29

The Vice-Consul concludes his report by giving the following statistics relating to the wells at the field:—

	1904.	1905.	1906.	1907.
Average number of wells—				
Bailing each month ..	1,700	880	1,555	1,667
Drilling and deepening each month ..	350	141	279	402
New wells and deepened wells started producing ..	165	140	239	237
Wells lying idle..	1,400	2,423	1,443	1,516
New wells started drilling ..	217	214	312	237

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AMONG THE SCOTCH OIL COMPANIES.

THE TARBRAX OIL COMPANY, LTD.

The fourth annual general meeting was held on Thursday week in the Religious Institution Rooms, Glasgow—Mr. William Fraser presiding.

The Chairman said they found that, after providing for the maintenance of the works and mines during the year, and including the sum of £3,542 5s. 3d. brought forward from last year, there was a balance at the credit of profit and loss account of £23,072 2s. From this amount there fell to be deducted interest on loans, £1,902 3s. 5d., leaving a net profit of £21,169 18s. 7d. The directors recommended that this profit should be dealt with as follows:—(1) In writing off for depreciation, £6,000; (2) in payment of a dividend at the rate of 6 per cent. on the preference shares of the company, £2,400; (3) in payment of a dividend at the rate of 15 per cent. on the ordinary shares of the company, £9,750—£18,150; leaving a balance of £3,019 18s. 7d. to be carried forward to the current year. He was glad to be able to submit a report and balance sheet which, under the circumstances of the past year's working, might be considered satisfactory. The results of the year's working were adversely affected by the great increase in the price of coal and a consequent increase in wages. At one period of the year the cost for coal was fully double what it was previous to the advances. He was glad to say that a substantial reduction had been effected on the cost of coal, and there was every reason to expect a return to normal conditions, both as regards the cost of coal and of wages. The works had been fully employed during the whole year, and the yield of crude oil and sulphate of ammonia got from the shale had been satisfactory. The directors purposed issuing the small balance of 10,000 preference shares, the object of this being to reduce the large sums held on loan by the company. When the third bench of retorts was erected two years ago no additional capital was provided, but the money was got on loan. The directors desired to reduce, and indeed to clear off, these loans as soon as practicable. The directors had not yet come to a decision as to how these shares would be placed. Regarding the year upon which they had just entered, without committing himself, he might say that the prospect looked favourable. With cheaper coal and reduced wages, which were the largest items of expenditure in connection with a crude oil work, costs should be substantially lower during the year. The report mentioned that in the original agreement with the Pumpherson Oil Co., Ltd., some omissions were made which, subject to the approval of the company, had been corrected by an amending agreement. In the original agreements between the companies, it was intended to include in the deductions to be made in ascertaining the price payable to this company for crude oil an allowance to the Pumpherson Co. for administrative and other charges, and the accounts were made out on that footing. While this was the clear intention of parties, Mr. William McLintock, the auditor to the company, called attention to the fact, and gave it as his opinion that the agreement between the companies did not provide for this deduction, and, as the directors of both companies were agreed that this was a pure omission, they had entered into the amending agreement referred to in the report, and which was now submitted for approval. He proposed the adoption of the report and the declaration of a dividend at the rate of 6 per cent. on the preference

shares and a dividend at the rate of 15 per cent. on the ordinary shares of the company, both free of Income Tax, the dividend on the preference shares to be payable on June 5, 1908, and the dividend on the ordinary shares to be payable, one-half on June 5, 1908, and one-half on December 4, 1908.

Mr. John Paterson seconded, and the report was adopted.

On the motion of Mr. Turner, Messrs. John Paterson and Robert B. Tennent were re-elected directors.

Mr. Munro moved that the sum of 350 guineas be awarded to the directors for their services during the year, and this was agreed to. The auditor, Mr. William McLintock, was reappointed, on the motion of Dr. Brown, and the meeting concluded with a vote of thanks to the chairman.

THE PUMPHERSTON OIL COMPANY, LTD.

The twenty-fourth annual general meeting of the shareholders of the Pumpherson Oil Co., Ltd., was held in the Religious Institution Rooms, Glasgow, on Thursday week—Mr. John Paterson presiding.

In their annual report the directors state that after providing for the maintenance of the works and mines during the year, and including the sum of £6,180 15s. 4d. brought forward from last year, there was a balance to the credit of profit and loss account of £130,123 2s. 5d., which it was proposed to dispose of as follows:—In writing off for depreciation, £10,000; in writing off amount expended on improved plant during the year, £17,285 10s.; to reserve fund, £20,000; to fire insurance fund, £5,000; in payment of a dividend at the rate of 6 per cent. on preference shares, £6,000; in payment of a dividend of 50 per cent. on the ordinary shares, £55,250; leaving a balance of £16,587 12s. 5d. to be carried forward.

The Chairman, in moving the adoption of the report, already published, said that including the sum of £6,180 5s. 4d. brought forward from last year the gross profit was £130,123 2s. 5d. It was a matter of gratification that the anticipations they expressed at last year's meeting as to the probable results of the past year's operations had been fully realised, and that the board was in a position to submit so satisfactory a balance sheet, and to recommend the payment of a dividend of 50 per cent. on the ordinary shares of the company. The policy of the board has been directed to the continual strengthening of the company's financial position, so that after providing liberally for depreciation, reserve fund, etc., they carried forward a balance of £16,587. During a period of six years the dividends paid, including the one now recommended, amounted to 210 per cent. The policy of steady development as the finances of the company would permit has justified itself by the results. During the year the company had had to pay high prices for coal, and wages had been on a much higher scale. On the other side, the income for the year had been materially increased by the better prices obtained. For the current year that position has been reversed; prices on the whole would probably be lower. On the other hand, coal had already been substantially reduced in price, and, as wages in their trade was regulated mainly by coal miners' wages, there would naturally be a saving under this head also. A large extension of the works at Deans was in progress, and they hoped to have this work completed before the end of the calendar year. When this was done the production of the company and its profit-earning capacity would be substantially increased. As regarded the future, the position was quite satisfactory.

Mr. Wm. Fraser seconded, and the report was adopted.

Messrs. Wm. Fraser and Thomson McLintock were re-elected directors.

It was agreed to give the directors 1,600 guineas for their services during the past year.

THE PROPOSED NEW CONDITIONS FOR GOVERNMENT LAND LEASES AT BAKU.

The Ministry of Commerce and Industry has prepared a scheme of new terms for the leasing out by auction of Government petroliferous lands in the Baku district. According to this project it is proposed to lease out at Bebe-Aibat 16 plots of an aggregate area of 62 dessatines 1,803 sagesnes (169½ acres). The total obligatory minimum production for these plots has been fixed at 23,405,000 poods. At Saboontchi it is proposed to lease out seven plots of an aggregate area of 29 dessatines 919 sq. sagesnes (78½ acres), the minimum obligatory production having been fixed at 8,808,000 poods per annum. At Ramany it is proposed to lease out five plots of an area of 13 dessatines 880 sq. sagesnes (30 acres), the minimum output for which has been fixed at 4,010,000 poods. At Ramany-Saboontchi it is proposed to lease out five plots of an aggregate area of 19 dessatines 1,091 sq. sagesnes (50 acres), and a minimum annual output of 7,733,000 poods.

At Balakhany 12 plots are to be leased out of an aggregate area of 56 dessatines 446 sq. sagesnes (151½ acres) and a minimum annual output of 1,863,000 poods. At Binagadi it is proposed to lease out six plots of a total area of 24 dessatines, 1,990 square sagesnes (67 acres) and a minimum output of 319,000 poods per annum.

The minimum obligatory number of wells to be drilled on each plot ranges between one and six. The aggregate of the minimum amount of drilling to be done on each plot ranges between 1,050 and 8,400 feet.

The above project has formed the subject for discussion by the special conference which met at St. Petersburg to consider the liquid fuel question, and also by a special commission formed at the Ministry of Commerce, in which representatives of the petroleum producers were present.

BORYSLAW PRODUCTION DURING APRIL.

The total production of crude oil at the Boryslaw-Tustanowice field in Galicia during April amounted approximately to 125,000 tons. The production of the largest producing plots was as under:—

BORYSLAW—					
	Tons.			Tons.	
Alexander	1,150		Jeanette	1,140	
Fanto and Co. ..	2,110		Moritz	1,240	
Dr. Freund	1,040		Natan	2,150	
Galicia	2,600		Ratoczyna Boryslawska	4,250	
TUSTANOWICE—					
	Tons.			Tons.	
Alois	2,900		Montan Co.	2,550	
Berthold	25 190		Mukden	2,030	
Bitum	1,990		Mercedes	1,360	
Banzay	1,150		Parnes	3,430	
Clay I. and II ..	2,080		Popielanka	1,120	
Cecylia	1,000		Popperowa and Dlugosz	1,180	
Ewka	3,000		Roman	1,000	
Ernestyna	1,060		Ressignier I. and II.	1,180	
Fortuna	1,120		Salo	2,020	
Galician Co. ..	5,650		Sumatra	1,500	
Galicia Co. ..	2,090		Smolka	1,050	
Hucul	2,000		Trunkwalter	2,800	
Hala	1,800		Naphtha Industrie A.G.	1,550	
Ignacy	1,130		Urycz Co.	4,850	
Carpathian Co. ..	7,270		Wilno	5,920	
Litwa	3,000		Wygoda	4,800	
Laura	2,220				

PETROLEUM IMPORTS INTO THE UNITED KINGDOM DURING MAY.

THE SHIPMENTS INTO VARIOUS PORTS.

The imports of petroleum and its allied products into the various ports of the United Kingdom during May are given in detail in the following table. In all, the oil

trade for the month amounted to 31,271,038 gallons, as compared with 26,623,928 gallons for April. The quantitles of the various shipments are as under:—

PORT.	Lubricating.	Illuminating.	Residuals.	Benzine.	Other Products	Fuel.	Gas.
Aberdeen	500	8,400	—	—	—	—	—
Belfast	1,160	1,245,780	—	—	—	—	—
Bristol	136,921	10,290	11,560	—	—	—	—
Cardiff	30,000	642,060	—	—	4,000	—	—
Dublin	—	1,837,480	—	—	—	—	—
Dundee	1,995	1,600	—	—	—	—	—
Glasgow	168,075	—	360	—	2,800	—	—
Grangemouth ...	31,590	18,500	—	—	—	—	—
Grimsby	3,205	—	—	—	—	—	—
Harwich	1,535	—	—	—	—	—	—
Hull	284,940	1,624,930	2,240	—	5,240	—	253,000
Leith	19,290	30,720	—	—	—	—	—
Lerwick	90	—	—	—	—	—	—
Liverpool	1,268,230	2,050	127,175	44,580	2,430	—	981,770
London	1,199,352	7,448,970	15,000	5,220,500	50,000	581,840	2,919,920
Manchester	1,934,020	2,342,270	—	—	8,190	—	—
Middlesboro' ...	1,360	—	—	—	—	—	—
Newcastle	11,820	—	—	—	—	—	—
Newport	16,000	—	—	—	—	—	—
Plymouth	350	655,500	—	—	—	—	—
Southampton ...	1,300	—	—	—	—	—	—
Swansea	9,750	—	—	—	—	—	—
Totals	5,171,483	15,868,950	156,335	5,265,080	72,660	581,840	4,154,690

NOTES FROM ALL QUARTERS.

RUSSIA.

A Saboontchi Spouter.—About the middle of May a spouter began to flow on the Nobel property at Saboontchi, yielding 300,000 poods of oil per 24 hours.

Baku Shipments.—The quantities of various petroleum products shipped from Baku by sea during the first 15 days of May (o.s.) amounted to 19,447,446 poods, of which 14,294,223 poods were residuals. For comparison it may be mentioned that in the whole of May, 1907, the total shipments were 54,500,000 poods.

Closing of Case Oil Works.—Messrs. Mantascheff and Co. have decided to close their case factory at Batoum, where 5000 men are employed, as the working of the latter brings them nothing but loss. On the other hand, this firm's case factory in Alexandria has been enlarged and works very successfully. According to another report, 75 per cent of the men are to be discharged from the Batoum works.

Another Diesel Success.—A vessel has just been launched at the Kolomna engineering works on the Volga, built to the order of Messrs. Merkuleff and intended to carry petroleum products in bulk on the Caspian Sea. The remarkable feature of this vessel is that it will have no boilers but will be propelled by Diesel engines, whereby a saving of 70 to 75 per cent. in fuel is expected. The vessel is 365 feet long, and has a carrying capacity of 3,500 tons of oil. The vessel can be fully loaded in three hours.

Bebe-Aibat Bay Plots.—The Russian Government has announced that it is prepared to lease out for exploitation for petroleum the still undisposed plots in the reclaimed portion of Bebe-Aibat Bay, Nos. 56, 58, 59, 61, and 63 to 105. Applications must be sent in not later than 1/14th June, 1908, and must be accompanied by a deposit of 30,000 roubles for each plot, which is to be applied to cover the proportionate cost of reclaiming the land. The royalty is fixed at 30 per cent., and the Government will not take any responsibility for the petroliferous nature of the ground.

The Baku Naphtha Company.—The annual meeting of the Baku Naphtha Co. took place in St. Petersburg on May 11th, when holders of 18,000,000 shares were present. The largest shareholders are: Banque des Pays Autrichiens, 2,610 shares; Banque de Paris and des Pays-Bas, 825 shares; Volga-Kama Commercial Bank, 1,318,000 shares; E. Hosquier and Co., 1,022,000 shares; Russo-Chinese Bank, 2,841 shares; and St. Petersburg International Commercial Bank, 3,565 shares. The accounts and report were adopted without discussion. It was resolved to take immediate steps to develop the company's property at Surakhany, of which 30 dessatines is proven petroliferous. It was announced that the recently-sanctioned new issue of shares will be made at 275 per share of a nominal value of 100 roubles. The issue has been guaranteed by a foreign Syndicate.

AMERICA.

The Santa Maria Field.—The output of the Santa Maria field for April was close upon 1,000,000 barrels, all of which went into the market.

A Canadian Gusher.—A dispatch from Toronto reports that an oil gusher has been struck near Mersea, and is yielding about 500 barrels daily. Owing to lack of storage facilities, the oil for the first few days went to waste. The adjoining territory is shortly to be actively drilled.

Jennings Again to the Front.—The Jennings, La., oil field is again to the front with a strike of oil of a most prolific nature upon land belonging to the Producers' Oil Co. The well came in with an initial production of about 5,000 barrels, and the yield is continuing remarkably good.

In Eastern Oregon.—The *Oil, Paint and Drug Reporter*, announces that recent oil discoveries in Eastern Oregon, near the Idaho line, are to stimulate a thorough exploitation of the territory by Pittsburg capitalists, who, it is reported, are quite satisfied with the prospects for successful development.

An Important Contract.—An important contract has recently been arranged between the Standard and the Union Oil Companies, by which the latter company sells to the former 2,000,000 barrels of oil at the price of \$1 per barrel. The price paid is the highest ever received for the Santa Maria product.

Birthday Celebration.—Mr. Joseph Seep, of Titusville, Pa., head of the purchasing branch of the Standard Oil Company, has recently celebrated his seventieth birthday. It is reported that Mr. Seep's annual disbursements on behalf of the Standard for oil purchased amount to \$100,000,000.

The Monument to Drake.—The movement to erect a suitable memorial to the memory of Colonel Drake is being pushed forward, and it is expected that the monument will be ready for dedication on August 26th, 1909, the fiftieth anniversary of the bringing in of the first well in Oil Creek, in Venango county.

The Crowley Company's Balance Sheet.—The annual report of the Crowley Oil and Mineral Co. shews that after paying dividends amounting to \$180,000 there is still left an undivided sum of \$38,000. During the past year the company has drilled nine wells, and is now engaged upon drilling two others.

Light Oil Stocks.—The stocks of light oil held by the Prairie Oil and Gas Co. at the end of April amounted to 35,700,000 barrels, while those held by the Texas and the Gulf Companies represented approximately 8,000,000 barrels. The total stocks of the various grades of oil held by the companies at the end of April were just over 74,000,000 barrels of which 43,000,000 barrels was the Kansas product.

The Glenn Pool.—The *Oil Investor's Journal*, in its current issue, states that in the Glenn Pool the conditions are not improved. On the contrary, less oil is being run now than in any month since March of last year, when three pipe line companies took about 32,000 barrels per day. For the first half of May, the runs of the pipe line companies averaged 40,000 barrels daily, as against 82,000 barrels for the October average.

ROUMANIA.

Damage by Fire.—The installations of the Nafta Co. at Bustenari were partly burnt down a few days ago. The damage done was considerable.

In the Buzeu District.—The borehole of the Steaua Romana at Policiori, in the Buzeu district, after being slightly deepened, has had an eruption and produced 30 tons of oil.

The Alpha Co.—The Alpha Co.'s balance sheet made up to the 31st December, 1907, shews a loss of 37,229 francs. The nominal capital of the company is 1,000,000 francs. There is a debt to the Petroles de Roumanie Co. for 2,110,148 francs and other creditors for 237,494 francs. The assets are:—Concessions, 1,017,933 francs; boreholes, 538,097 francs; materials, 438,615 francs; cash at bank, 152,193 francs; and storage installation, 514,513 francs.

Improving Production.—The production of crude oil in Roumania appears lately to have improved. The two prolific wells recently struck, namely, No. 107 of the Steaua Romana at Campina, which, in the first ten days of May (o.s.) yielded 2,364 tons, and the well of the Concordia Co., at Calinet, which produces between 80 and 100 tons daily, both continue to flow with unabated force, and this will result in an increased production in May.

Will Galicia Have a Chance?—Mr. Altmanu, of Drohobycz, is negotiating with Roumanian refiners with a view to importing Galician crude oil into Roumania. As a result of over production and insufficient storage accommodation the price of crude oil in Galicia has fallen to 11 francs per ton, whilst in Roumania the refiners have to pay about 45 francs. The main difficulty lies in the import duty of 20 francs per ton, and importation will only become possible if the Roumanian Government will agree to reduce the duty, which it is scarcely likely to do.

Crude Oil Prices.—The price of crude oil in Roumania remains at the level of 44 to 46 francs per ton, including pipe line charges. The price of residuals also remains unchanged, between 38 and 40 francs per ton at the refineries. Illuminating oil for export remains at 70 to 75 francs. There is a good demand for illuminating oil for export, and as there is a shortage of available goods, there are no spot sales, and dealing is restricted to forward sales, for delivery two or three months hence. The price of illuminating oil for the home trade has gone up to 80 to 90 francs per ton. The Romano American Co. having withdrawn from several localities, it became possible to advance prices.

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THE PETROLEUM REVIEW,

45, St. Mary Axe, LONDON, E.C.

American Office: 150, Nassau Street, New York.

SATURDAY, JUNE 6, 1908.

TWO IMPORTANT CONSULAR REPORTS.

OF the numerous reports of the English Consuls which are read with very careful interest by those who are either directly or indirectly associated with the petroleum industry, there are none, we venture to believe, which have that importance which attaches to the annual official records of the trade and commerce of Baku and Batoum, the two great centres, so far as the petroleum industry is concerned, in the Russian empire.

After reading the reports of the respective Consuls for the past few years, we have to admit they have left a tinge of regret behind them, and this could possibly not have been otherwise, bearing in mind the chaotic state in which the Russian petroleum industry has been wrapped for so long a time. The official reports for the past year are, happily, of a totally different trend, and shew that the industry is clearing itself, slowly it may be, of much of that which has in times past done so much to stop the hand of progress.

The average English reader has hitherto placed far too much reliance upon the gloomy pictures drawn by incompetent minds who are in charge of the affairs of English operating oil companies in the Caucasus, and when straight and uncoloured facts have been placed before him, he has been rather inclined to take these with the proverbial grain of salt. But recent events have led him to enquire more carefully into actual facts, and this is one reason why, year by year, the consular reports are clothed with far more importance.

Looking first at the yearly report from Baku, it must be admitted that the past year has not been half so bad as many have been led to imagine, and as to the present prospects, these are indeed fairly bright. As the Vice-Consul appropriately points out, the labour question at the oil fields is by no means the difficult problem it has been in times gone by. Thanks to the Caspian Society, the workers have been shewn that after all, there are other interests than theirs which call for consideration in oil field operations, and now that strikes no longer carry with them payment for workmen during those times when operations are at a standstill, we may expect to hear less of such labour troubles in the future than we have in the past. Thus, then, will disappear one of the problems which have called for much consideration hitherto, and which have been responsible for much of the chaotic state of affairs associated with recent oil operations in the Caucasus.

To bring a national industry back to its former days of prosperity and international importance is, of course, an evolution fraught with much that must necessarily be slow in its movement, yet there is cause for congratulation in the fact that matters are to-day moving in the right direction. The production of oil at Baku is certainly shewing signs of going back to its old level, and though, perhaps, many may express disappointment that more has not been achieved, there is still much to be said favourable to what has already been accomplished. Prices too have maintained a most remunerative level, and for the past year they stand out at quite a record, the average figures being far in advance of previous years.

Whether the industry can ever regain its former importance in international commerce is a question upon which opinion may be greatly divided, for its retrogression has for some years been continuous. One would have thought that the Government, interested as it is to such an enormous extent in all that is connected with the empire's petroleum industry, would have strained every possible nerve to have upheld the prestige of its commerce in oil, and the fact that it allowed by

its indolence and perfect indifference so valuable a national asset to drop so low must always remain one of the darkest pages of Russia's oil history. Russia has sadly missed its chances, and even in very recent years, almost to the present day, the opportunities which come along are of no avail. When the Government does take any step in regard to its petroleum industry the chances are that it will be diametrically opposed to the best interests of development and extension. How many times have we seen the very existence of the Russian petroleum industry quiver as if about to fall as the result of some remarkable piece of legislation?

But if there is one thing which causes the note of regret to ring loud, it is the brief comment by the British Consul at Batoum who says, "the foreign petroleum trade of the Caucasus has seen its best days." And the statistics certainly go a long way to support this statement. The export of oil from Batoum is no longer that vastly important factor it used to be. Last year, for instance, though the 37,000,000 poods shipped abroad were slightly in excess of the figures for 1906, they constituted only half the total quantities exported four years previously, while they were little more than one quarter those for 1900. When such figures as these are looked in the face, and when one realises that three-quarters of the trade has already departed, there is then some justification for one's becoming pessimistic and giving vent to the words quoted above by the British Consul.

Here again we see how great a work the Government could have accomplished had they but looked at the matter in a reasonable light, and taken those having a direct interest in the petroleum industry into their confidence. To-day, Russia might have maintained its powerful hold upon the markets of the world, and its petroleum products might have found an ever-extending market both east and west. One can only hope, and the hope is not altogether of a forlorn character, that the Russian petroleum industry may still rise to greater things both at home and abroad. We admit that there are many discouraging features to face, and even during the past few days the closing of another case oil factory at Batoum does not improve the outlook. Still the future has its possibilities, and even in the eleventh hour we trust both the Russian Government and those associated with her petroleum industry will not waver in what is clearly their duty to themselves and international commerce as a whole.

The Petroleum Distributing Company, created by the Steaua Romana and Aurora Companies, will commence business on the 1/14th of June, whilst the new law regulating the home trade in petroleum will come into force on the 1/14th July, *i.e.*, a month later. The founders of the distributing company are working actively on the preparations, and are also making great efforts to induce all refiners to join their organisation.

The International Company.—On June 5th an extraordinary meeting of shareholders of the International Co. took place at Amsterdam to elect new members in place of Messrs. I. Wolff de Beer and E. F. L. de Bar (resigned), and Mr. Fritz Olie (deceased), and to appoint a new manager in the place of Mr. Gerbrand Olie, who has resigned. It was also proposed to discuss the whole situation of the company and take steps for re-organising the management.

THE SHALE DEPOSITS OF NEW SOUTH WALES.

CONSULAR REPORT.

Mr. Orlando H. Baker, of Sidney, has recently issued a consular report, in which he refers to the efforts now being made to work the shale deposits of New South Wales. He points out that the deposit of kerosene shale, about 120 miles west of Sidney, is said to be the largest in the world. There is a stream called the Wolgan River, in the valley of which, and adjoining which, most of these deposits are found. They are estimated to cover 41 square miles; depth of seam varying from a few inches to six feet. The richest shale is at the Joaja mine, 77 miles from Sidney, said to yield 130 gallons of crude oil per ton, or 15,400 cubic feet of gas, with an illuminating power of 48 sperm candles. Some of this shale has averaged as high as 160 gallons of crude oil per ton.

A company recently formed* has erected plant and works and built a railway to connect the shale fields with the Western Line, thereby opening up a tract of country. Besides shale, there are valuable deposits of coal, clay, and ironstone on the company's ground. The land is well timbered, and should in the future attract a considerable population.

The shale occurs in layers of two qualities—the first and richer is used for gas making, while oil is extracted from the second. The primary object of the company is the conversion of this retorting quality of shale into oil, and the refining of its other products. Scotch shale yields by distillation, at the most, about 30 gallons of oil a ton, while about two-thirds of its weight consists of residual mineral matter. As a result of careful tests and analyses, it has been found that Wolgan shale contains only 15 to 30 per cent. of mineral residue; it yields by distillation rarely less than 80 gallons of oil a ton, while large sections give from 130 to 150 gallons. Moreover, the quality of the Wolgan oil appears to be superior to that of any other obtained from shale. There exists in the company's property a proved 20,000,000 tons, and in addition an assumable 30,000,000 tons of shale, which is

* The company to which the Consul refers is the Commonwealth Oil Corporation, Ltd., the general manager of which is Mr. D. A. Sutherland, and whose chief offices are in Victoria Street, S.W.—ED. P.R.

to say, about 60,000,000 barrels of oil. This oil the company proposes to extract at the rate of from 10,000,000 to 12,000,000 gallons a year. Like crude petroleum, this crude shale oil yields not only oil for gas-making purposes, but motor spirit, illuminating oil, lubricating oil, paraffin wax, and other products. The annual amount mentioned would yield, among other substances, about 3,000,000 gallons of kerosene.

The richer, or gas-making shale, appears to be as superior for gas purposes as the other is for oil. One gas company has, in fact, already taken 10,000 tons of it from the company within a year. It gives the exceptionally large amount of over 17,000 cubic feet of gas a ton, and is, therefore, of more value for gas-making purposes than cannel coal or any other product.

The company's retorts and refineries are not yet completed, but that is only a question of time. The coal seam which is being developed in the same district is now yielding 400 tons a day. This coal is very even in quality and produces a high class coke, of which the ash averages less than ten per cent. and which does not contain more than one-half per cent. of sulphur. There is at present a very large demand for coke, and this, as well as the oils, will be exported in increasing quantities.

The Wolgan-Capertee district is likely to turn out one of the most valuable in New South Wales, perhaps in the Commonwealth.

THE PETROLEUM TRADE OF NOVOROSSISK DURING 1907.

H.M. Vice Consul at Novorossisk, in reporting upon the petroleum trade during 1907, says that arrivals from Baku ceased altogether in that year, the petroleum products coming exclusively from the Grosny oil fields. In 1907 the exports were 90,879 tons as against 94,654 tons in 1906. The details are given as follows:—Russia, kerosene 22,297 tons, residuum 24,922 tons; Austria-Hungary, kerosene 970 tons; France, kerosene 5,137 tons, ligroine 23,040 tons; Germany, kerosene 5,409 tons, ligroine 7,503 tons; United Kingdom, ligroine 1,000 tons. Total, kerosene 34,414 tons, residuum 24,922 tons, ligroine 31,543 tons; 1906 total, kerosene 50,159 tons, residuum 29,710 tons, ligroine 14,525 tons.

CLASSIFIED IMPORTS INTO UNITED KINGDOM UP TO JUNE 1st, 1908.

IN GALLONS.

[ALL RIGHTS RESERVED.]

COUNTRY.	ILLUMINATING.		LUBRICATING.		RESIDUALS.		GAS OIL. (Solar)		BENZINE.		FUEL OIL.		OTHER DESCRIPTIONS.		TOTALS.	
	Since May 18.	From Jan. 1.	Since May 18.	From Jan. 1.	Since May 18.	From Jan. 1.	Since May 18.	From Jan. 1.	Since May 18.	From Jan. 1.	Since May 18.	From Jan. 1.	Since May 18.	From Jan. 1.	Since May 18.	From Jan. 1.
Austria ...	—	—	11,000	34,400	10,000	38,920	—	—	—	—	—	—	—	—	24,000	77,320
Belgium ...	—	—	66,625	364,109	—	36,000	—	—	—	40	—	—	—	1,440	66,625	401,589
Canada ...	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Dutch India ...	—	—	—	—	—	—	—	—	1,729,940	10,479,210	—	—	—	—	1,729,940	10,479,210
Germany ...	357,580	2,270,830	56,815	715,157	—	6,090	—	—	—	270	—	—	—	6,070	414,395	2,998,417
Holland ...	—	—	—	9,220	—	—	—	—	—	121,920	—	—	—	—	24,060	155,200
Roumania ...	—	4,019,700	—	—	—	2,240	1,205,330	5,638,480	286,000	2,287,520	—	—	—	—	1,491,330	11,947,940
Russia ...	2,272,420	9,000,100	846,160	2,276,805	119,320	187,320	—	—	—	1,478,700	—	—	50,000	50,000	3,287,900	12,992,844
U.S.A. ...	7,862,300	52,174,380	1,169,760	18,797,325	—	629,255	1,416,950	18,861,220	—	978,840	581,840	1,940,140	11,120	736,720	11,041,970	95,117,880
Other Countries	100	440	1,520	46,915	—	40	—	—	—	280	—	560	440	600	2,060	48,835
	10,492,400	67,465,450	2,154,880	22,243,931	129,320	899,865	2,622,280	25,499,700	2,015,940	15,346,780	581,840	1,940,700	61,560	818,890	18,058,220	134,219,235

"THE OTHER SIDE OF THE STANDARD OIL COMPANY."

Under the above title the Hon. V. P. Kline, one of America's distinguished attorneys, contributes a most pointed article to a recent issue of the *Ohio Magazine*.

Mr. Kline, who has been connected with the legal counsel for the Standard Oil Co., for many years, strikes the key note to the controversy against the Standard when he says: "The motives which actuate public officials in their attacks, through the courts, on the Standard Oil Co. are matters of no concern. However such motives may be misjudged, misrepresented or criticised, such reflections do not in any way answer the attacks. Nor, if a corporation is carrying on its business in violation of law, is it any answer that business interests will be greatly imperiled thereby."

After dealing with the Standard's history, and the right of combination, Mr. Kline concludes his article as follows:—

The attitude of the Standard Oil Co. is not that of defiance to the law. It believes that its present form of organisation, which is precisely the same as that of the United States Steel Corporation and of other large combinations, is fully authorised by law. No complaint seems to be made of this form of organisation, except in the case of the Standard Oil Co. If the judgment of the courts proves to be that this form of organisation is illegal, the Standard must yield to the law precisely as the humblest citizen must do. Until such adjudication, however, it has the same right to present its views to the courts and await their decision upon the question involved. If the courts hold that its form of organisation is illegal, the others must fall with it, and the modern system of organisation, which has so advanced our trade at home and abroad, must be revolutionised.

The complaint seems to be that the Standard Oil Co. of New Jersey owns the stocks of corporations in various States, and that such form of ownership is illegal. It seems to be conceded that if, instead of owning stocks, it owned the properties of the various companies direct, and did business as a foreign corporation in the various States, that form of organisation would be lawful. This seems to me to be a distinction without a difference, and in view of the fact that the laws of some States of the Union practically prohibit the transaction of business within their borders by foreign corporations, while others impose burdens so heavy as to be almost prohibitive, no other form of organisation can be practically employed until the federal government authorises the organisation of corporations, under federal law, for the transaction of corporate business.

So far as favouritism in transportation or unfair competitive methods are concerned, opinions cannot differ. The Standard is not entitled to the benefit of them, nor does it seek them. Doubtless in early years, when every large business industry made its own separate contracts with transportation companies, and there were no fixed transportation rates, the Standard offended with the others. Since the awakening of public opinion upon these questions, and its embodiment in the

interstate commerce legislation, I am entirely confident that, in spite of all the charges made against the Standard Oil Co., it will eventually appear that it has rigorously and honestly sought to obey the requirements of that legislation. All it can ask, and all it ought to receive, is that rates should be equal and stable, and this, I believe, the public will ultimately be satisfied is all that it has asked, and all that it has received.

THE TIN PLATE MARKET.

Messrs. Norton, Owen & Co., of 4, Bishopsgate Street Within, London, E.C., report under date June 4th, 1908, as follows:—

There has been more enquiry for tin plates during the last week or so, especially for oil sizes for prompt delivery, for which higher prices have been paid than have been ruling of late. The hot weather is already affecting production, and should it continue, a considerable curtailment of the output is to be expected.

Prices of oil sizes are to-day:—

1C	18 $\frac{3}{4}$ × 14	124 sheets	110 lbs.	12/6 to 12/9 per box.
1C	19 $\frac{1}{2}$ × 14	120 ..	110 ..	12/6 .. 12/9 ..
1C	20 × 10	225 ..	156 ..	17/6 .. 17/9 ..

F.o.b. Wales. Tin lining and iron hooping extra.

SOCIÉTÉ FRANCAISE DE PETROLE.

A cable advice received from the manager of the above company states that the depth reached in No. 1 well is 666 feet, being an increase of 65 feet during the four weeks ended the 30th ult. The present formation is soft red sandstone, and the manager reports that in view of the encouraging formation and indications, he has decided to enlarge the hole to seven inches before drilling deeper. This work, it is stated, is progressing satisfactorily.

BATOU M PETROLEUM SHIPMENTS.

The following were the shipments of petroleum products from Batoum during the week ended May 23rd, o.s. (in poods):—

	Illuminating Oil.		Other Products.	
	1907.	1908.	1907.	1908.
To Europe ..	220,000	402,000	335,000	580,000
To the East ..	131,000	67,000	9,000	4,000
To Russian Ports.	—	238,000	4,000	8,000
From 1st Jan. to 10th May:—				
To Europe ..	6,475,000	4,437,000	3,759,000	4,272,000
To the East ..	4,768,000	5,404,000	111,000	29,000
To Russian Ports	1,006,000	1,503,000	53,000	33,000

BORE HOLES FOR OIL

Contracted for by

JOHN M. THOM,

Canal Works,

Patricroft MANCHESTER.

CONTRACTOR TO H.M. GOVERNMENT.

THE LABARGE OIL FIELD, WYOMING.

UNITED STATES
GEOLOGICAL REPORT BY . .
MR. ALFRED R. SCHULTZ. .

(Concluded from page 301.)

North of Hams Fork oil indications have been observed at several places along the east base of the Absaroka and Salt River ranges, near the fault line. Oil was observed on the water along some of the streams tributary to Fontenelle Creek. In Pomeroy Basin oil indications were observed on the water in a number of marshes, in quaking asp groves and low depressions. It is reported that about 12 miles north of Kemmerer, along Mammoth Hollow, there is a spot where gas makes its escape and on a damp morning can readily be detected by its rank odour. Indian tradition has it that many years ago there used to be near this same locality an oil spring from which oil flowed. No trace of this spring was seen during the course of the writer's work. However, owing to the heavy covering of talus and timber in this vicinity, as well as to the numerous springs that rise on the mountain sides or flow from snowbanks near the crest of the range, traces of oil are not so readily seen or recognised as in the southern part of the county. In the northern part of the field examined in 1906, about two and one-half miles west of Snake River, along the north line of township 39 north, range 116 west, oil was observed on the water and in footprint depressions. The oil seen here has a distinct odour and a greasy feel.

Farther north in Idaho, east of the Pierres Hole (Big Hole) Mountains, W. E. McDonald observed strong surface indications of the presence of oil in the vicinity of David Breckenridge's ranch and later vigorously prosecuted the work of boring for oil on this ranch. So far as the writer was able to learn, Mr. McDonald struck a 10-foot bed of coal at a depth of 650 feet, but found nothing in the way of oil that indicated values.

Although no prospecting, drilling or development work has been done north of Kemmerer on the oil-bearing Aspen and Bear River shales to determine whether they contain as much oil as the beds at Spring Valley, their occurrence throughout this region, east of the Absaroka and Salt River ranges and east of the Wyoming range, is certain. They extend from Spring Valley in Southern Uinta county to Snake River in Northern Uinta county, and it is not improbable that they contain oil throughout this area in much the same abundance as has been found in the southern part of it. The approximate distribution of these oil-bearing shales can be inferred, as they occupy a narrow belt along the east side of the areas containing Frontier coals. No oil is found along the outcrop of these beds so far as observed. This fact, however, does not prove that oil is not present, as the oil near the surface may all have escaped or settled toward the synclinal axis, so that it is not noticeable on the surface.

In the vicinity of Spring Valley, the only locality where the Aspen shale has been developed, the oil is found in sandy layers in a black shale near the base of

the formation. Failure to obtain oil in this locality has been recorded in three types of wells—(1) those not deep enough to reach the oil-bearing beds: (2) those which on account of the irregularities of the sandy layers in the Aspen (Benton) shale fail to produce oil, although oil is present in adjacent wells; (3) those located on the outcrop of the shale, particularly near the lower or eastern edge, where the bed is less than 500 feet thick. Although in general no oil is found along the outcrop of the oil-bearing shale, the amount increases down the dip. The conditions of the oil problem in the Spring Valley locality as well as in much of the territory north of that place, can best be set forth by the following statement:—

The oil-bearing beds are entirely dry when the oil is pumped out of the wells; no water follows. Water occurs in the overlying Wasatch beds and in the sandstones of the Frontier formation, and is also reported in a sandstone several hundred feet below the main sands, as in the Jager well and the Consolidated Oil Co. well. The occurrence of large quantities of water in the Betty's well and the Baker well has been regarded by some as affecting the oil situation, but the water-bearing beds here are in no way connected with the oil-bearing strata. The anticlinal theory according to which oil accumulates by floating upon water on the flanks or crests of anticlines, does not seem to apply to this field, for one of the essential factors in the theory—the water in the oil-bearing sand—is not present. The absence of water in the oil-bearing sands, together with the fact that springs do not occur along the outcrops of the beds and the irregularity shewn in the position of the oil-bearing sands in adjoining wells, suggests that the oil has been formed from the shale in which it is found and that the oil-bearing shales represent local sandy layers more or less perfectly surrounded by shale in which the oil has accumulated. This is the case also in the Boulder and Florence fields, although at these localities the shales are geologically younger. In the absence of water, oil tends to move down the dip and, so far as the continuity of the porous beds will allow to collect in the troughs of the synclines. This is apparently the case in this field, and the position of this syncline and the depth of the oil-bearing shale at its lowest point then become matters of considerable economic importance.

Because of the rising and pitching of the Laxeart syncline, the oil-bearing shale in the synclinal trough lies at various depths below the surface along the axis. In a part of the region the depth of the oil-bearing shale along this axis is practically prohibitive to development work. However, the soft character of the beds suggests that the pressure of the superincumbent rocks may be great enough to practically close the pore space, so that the maximum accumulation of oil may be found at some point on the limb of the syncline, between the axis and the outcrop. In the vicinity of the fault, contact may partly cut off for the same reason and the

oil may be stored on the limb of the syncline. If the above-lined conditions are true, prospecting in much of this field should be restricted to the shallow portions of the synclinal basin and to the region between the axis of the syncline and the outcrop of the oil-bearing shale on the west flank of the Meridian anticline, as the depth of the oil-bearing shale along part of the axis of the syncline is practically prohibitive to profitable development.

One of the most favorable localities for oil prospecting is in the vicinity of Wright's ranch, in T. 23 N., R. 116 W., where the oil-bearing shale lies from from 2,500 to 4,000 feet below the surface along the centre of the syncline. Almost as favourable a locality is that along Fontenelle Creek, near the north end of the Laxeart syncline. The depth of the oil-bearing shale in the centre of the syncline is such that wells could be readily sunk, and test holes in this region are likely to yield results. Similar results may be expected in the synclinal trough that crosses Little Greys and Snake rivers in the northern part of the field.

In Southern Uinta county the well of the Pittsburgh-Salt Lake Co., in sec. 10, T. 14 N., R. 118 W., developed an oil-bearing bed in the lower part of the Bear River formation. The oil is black and more in the nature of a lubricating oil than of the Aspen shale. Although the Bear River formation extends throughout this area, lying conformably below the Aspen shale in a narrow belt along its east side, nothing further was learned about these oil-bearing beds. At no point within this field have wells been drilled to test the oil-bearing properties of either the Aspen or the Bear River shale.

East of Labarge River, no outcrop of Aspen shale was seen. The oil springs observed in this locality resemble those in the Fossil region in that the strata around the springs belong to the tertiary. The Wasatch beds here lie in a gentle anticline, with dips of about five degrees, and may represent the southern continuation of the anticline above mentioned at the north end of Labarge ridge. It is believed that the oil comes from the Aspen shale, which here lies from 2,000 to 4,000 feet below the surface. The oil is probably forced up through the water, which has penetrated to the oil-bearing shale along the fault east of Labarge ridge, and escapes at various points along the fault line. Part of the oil may be collected along the low anticlinal crest in the fairly waterlogged beds of the Wasatch, and makes its escape into the valley, where the oil prospects are located.

Whether the oil-bearing sands in this locality are dry like those at Spring Valley, or whether there is sufficient water present to float the oil and make it accumulate on the crests of anticlines, cannot be determined until drill holes are put down to the oil horizons. The success of much of the future prospecting depends on this factor, the correct determination of which becomes therefore a matter of considerable economic importance. If the anticlinal theory of oil accumulation applies here, drilling should be done along the anticlinal axis east of Labarge ridge; on the other hand, if the rocks are dry, the oil has collected in the troughs of synclines, and prospecting should not be carried on along the anticlinal crest. If the synclinal occurrence prevails here, the conditions in the Labarge oil field are manifestly more unfavourable for the accumulation of oil in commercial quantities.

All of the oil obtained from springs in Southern Uinta county is a dark, heavy oil, which may have been derived from the Aspen shale oils by the evaporation of the more volatile portions. Slossom gives the gravity of the Carter oil as 21.5° B. and that of the Fossil or Twin Creek oil has 19.7° B. The gravity of the Fossil oil is given by the Union Pacific Railroad as 26.75° B. The results of analyses of the Spring Valley petroleum and a sample collected from a shallow well about three feet square and six feet deep, sunk near the centre of a drain about four miles east of Labarge ridge, are given below. The latter sample was taken from an open pit which contained more than a foot of dark-coloured heavy oil.

Tests of oil from well of Pittsburgh-Salt Lake Oil Co. in Sec. 22, T. 15 N., R. 118 W., one mile north of Spring Valley (by C. F. Mabery, Cleveland, Ohio, 1906):—

Temperature (° C.) at which gas was given off on distillation.	Per- centage.	Gravity (° B.)	Nature of Product.
50-150 ..	21.3	65	Gasolene
150-305 ..	39.7	44	Burning oil
305-350 ..	16.4	36	Gas oil
350-380 ..	15.4	37	Oil partly cracked

Residue, 7.2. Specific gravity, $0.81=44^{\circ}$ B. The oil begins to crack at 350 degrees; of course this product is really gas oil. The distillates at 305-350 degrees, 350-380 degrees, and the residue contains much paraffin. These oils become solid when cooled in tap water with paraffin, so the yield is large.

Test of oil from shallow pit east of Labarge ridge, Green river basin, in Sec. 34, T. 27 N., R. 113 W. (by Dr. David T. Day, United States Geological Survey, January 8, 1908):—

Temperature (° C.) at which gas was given off on distillation.	Per- centage.	Specific Gravity.	Nature of Product.
Below 150 ..	Trace	—	—
150-300 ..	34	0.891	Suitable for burning

Specific gravity of the original oil, $0.9435=18.75^{\circ}$ B. The oil was collected from seepage into a shallow well. It had evidently suffered oxidation, as shewn by the considerable amount of resins contained. These resins made it difficult to completely separate water from the oil. The distillation was, therefore, slow and somewhat unsatisfactory. There is no indication of sulphur in the oil, no quantitative test being obtained by oxidation, and there is no odour of sulphur.

The specific gravity of the oil suitable for burning was so high that this portion was treated with sulphuric acid to determine whether the oil consisted of hydrocarbons of the paraffin (Pennsylvania) series. The amount absorbed by sulphuric acid was not abnormally large, and left a pleasant smelling, refined product. The examination of the residue not distilling below 300 degrees was extremely interesting. In addition to an oil soluble in cold alcohol, probably plain hydrocarbons, it gave a considerable amount soluble in boiling alcohol, which should have consisted entirely of paraffin wax, but did consist to a large extent of resins entirely absorbed by strong sulphuric acid, and giving evidence of being terpenes. The portion insoluble in boiling absolute alcohol, which should consist ordinarily of asphalt, gave, instead of the usual black asphalt, a soft, sticky material characteristic of the transition stage of resins into asphalt.

While the oil has suffered too much oxidation to be interesting from the refiner's standpoint, it is extremely interesting scientifically on account of the effects of the oxidation, shewing, as given above, the intermediate stage between oil and ordinary hard asphalt.

THE ROUMANIAN PETROLEUM INDUSTRY.

STATISTICS FOR THE FIRST QUARTER OF 1908.

The *Moniteur du Petrole Roumain* publishes statistical figures dealing with the Roumanian petroleum industry in all its branches in the first quarter of 1908.

Production.

The total production of crude oil at the Roumanian oil fields during the first quarter of 1908 amounted to 288,822 tons, against 269,760 tons produced in the corresponding quarter of 1907. The production of the separate fields was as under:—

	Three months, 1908. Tons.	Three months, 1907. Tons.
Prahova District—		
Bustenari	114,068	126,877
Campina-Poiana	64,434	54,902
Moreni	82,069	60,383
Other Fields	16,288	14,984
Total for Prahova	276,859	257,146
Dambovitza District	7,126	8,205
Buzen District	2,055	2,317
Bacau	2,782	2,092
Total	288,822	269,760

The production of the leading firms during the first quarter of the year was as under:—

	Three Months, 1908. Tons.	Three Months, 1907. Tons.	Number of productive boreholes, on Mar. 31, 1908.
Steaua Romana—			
Bustenari	30,018	42,110	110
Campina	47,426	51,979	62
Other Fields	3,823	7,220	46
Total	81,267	101,309	218
Regatul Roman Co.	59,011	44,962	22
Concordia Co. (amalgamation of Bustenari and Telega Companies)	40,965	43,288	145
Romano-American Co.	32,094	13,401	36
International Co.	8,888	11,299	24
Trajan Co.	9,108	6,565	22
Astra Co.	10,363	7,207	6
Colombia Co.	6,413	7,785	26
Aquila Franco-Romana	5,429	3,849	20
Arnheemsche Petroleum Co.	2,257	3,043	11
Nafta Co.	4,544	1,840	7
Galo-Romana Co.	2,051	1,337	8
Alfa Co.	4,680	—	6
Seceleanu Bros.	2,818	3,921	6
Stefanescu and Co.	1,378	1,299	5
Independent Co.	1,697	—	1
La Tosca Co.	1,043	440	1

Refineries.

The total quantity of crude oil treated at the Roumanian refineries during the first quarter of 1908 has amounted to 256,109 tons, as against 186,059 tons during the corresponding quarter of 1907, or an increase of 70,050 tons. The production of crude oil has shewn an increase of 20,000 tons for the three months.

The output of various products was as under:—

	Three months, 1908. Tons.	Three months, 1907. Tons.
Benzine	42,439	30,013
Illuminating oil and distillate	70,317	49,861
Lubricating oil	21,793	9,313
Residuals	116,270	90,459
Total	250,819	179,646

The home consumption of various petroleum

products in Roumania in the first quarter of the year was:—

	Three months, 1908. Tons.	Three months, 1907. Tons.
Benzine	355	135
Illuminating oil	9,514	8,894
Lubricating oil	1,663	938
Residuals	91,237	72,051
Total	102,769	74,037

Exports.

The exports of petroleum products from Roumania in the first quarter were:—

	Three months, 1908. Tons.	Three months, 1907. Tons.
Benzine	24,281	24,352
Illuminating oil	56,215	37,791
Crude, Gas oil, Residuals, etc.	31,934	11,894
	112,430	74,037

IMPORTS OF PETROLEUM INTO WUHU.

The imports of American kerosene oil into Wuhu during the year 1907 amounted to 4,130,900 gallons and thus exceeded those of 1906 by 179,950 gallons, and that of Sumatran oil (604,700 gallons) increased by almost the same amount; but while in the case of American oil this merely amounts to an increase of $4\frac{1}{2}$ per cent., Sumatran oil shews an advance of over 40 per cent. on the sales for the previous year. The Asiatic Petroleum Co. have now their own local representative, instead of working through the agency of another firm; and with the installation of oil tanks, the negotiations for which will, it is expected, be concluded shortly, it is hoped that the sale of Sumatra oil in this province will be considerably increased in the course of a few years. The Standard Oil Co., says a consular report just to hand, are reported to be also contemplating the erection of oil tanks at Wuhu. The import of Russian oil still further fell off from 423,250 gallons in 1906 to 134,500 gallons during last year.

ROUMANIAN PETROLEUM PRODUCTION DURING APRIL.

The *Moniteur du Petrole Roumain* publishes the following figures of the production of the leading firms in the Roumanian oil fields during April:—

	April. Tons.	March. Tons.
Steaua Romana	32,125	27,479
Regatul Roman	12,544	16,770
Concordia Co.	13,353	14,635
Romano-American Co.	10,291	13,375
Astra Co.	3,266	3,856
International Co.	2,731	2,828
Trajan Co.	3,104	3,150
Colombia Co.	2,115	2,319
Aquila Franco-Romana	1,788	1,866
Alpha Co.	1,003	1,655
Naphta Co.	1,493	1,459
Arnheemsche Petroleum Maatschappij	749	764
Galo-Romana Co.	530	304
Galia Co.	505	310
M Bloch	325	446
G. Stefanescu and Co.	415	438
Jean Ganz	629	185

THE CALIFORNIAN PETROLEUM INDUSTRY.

CONTINUED PROGRESS.

Writing upon the trade in the consular district of San Francisco during the year of 1907, the Consul-General (Mr. Walter R. Hearn) says:—Next to gold, petroleum is the most valuable mineral product of California. With an annual production of over 30,000,000 barrels, it furnishes employment to thousands of persons in field and refinery, and pours a steady flood of wealth into the channels of trade. Kern county is far in advance in the production of oil, with Fresno county second and Santa Barbara third. Rapid development has taken place in Santa Barbara field during the past two years, and its output is steadily growing.

The total production of oil in California in 1907 is estimated at 35,000,000 barrels (of 42 gallons), against 30,000,000 barrels in 1906 and 35,671,000 barrels in 1905. For a long time the various independent producers, especially those of the Bakersfield district, have threatened to build their own pipe lines and market their own product, being very much dissatisfied with the prices they obtained. The Associated Oil Co., however, the largest seller of petroleum in California, has heretofore been able to dominate the situation. In February, 1908, the representatives of these two bodies reached an agreement under which the independent producers will receive an increase approximating 50 per cent. on former prices.

The Southern Pacific Co. has placed a contract for the construction, within 18 months, of a 256-mile pipe line from Vulca, five miles north of Bakersfield, to Port Costa, on Carquinez Straits, Bay of San Francisco.

Twenty-three pumping stations, numerous large steel storage tanks and an 8-inch steel rifled pipe are features of the proposed construction. The latter is a new device, and was invented by two engineers attached to the company. They sought to reduce friction, and finally devised the rifled pipe constructed on the principle of a gun barrel, the idea being to give the liquid a swirling motion while it was being forced through the pipe. In order to demonstrate the practicability of this

idea the engineers secured permission to construct an experimental line 32 miles in length, a portion of the present system. That line has been in operation for over a year, and has proved a success.

Experiments have satisfactorily shewn that the rifled pipe will carry a stream of 20,000 barrels of fuel oil every 24 hours. The peculiar feature of the scheme is that both oil and water are forced through the pipe at the same time. The water being lighter, swirls about the oil, leaving the heavier fluid as a core flowing steadily on the inside of the revolving stream of water. The water also prevents friction and heating. This new system has reduced the cost of pumping, and made it possible to secure a greater flow of oil with pumping stations further apart than those used on the pipe line to Point Richmond. The pumping stations on the Southern Pacific Co.'s system are 24 miles apart.

When the new oil pipe is completed, about January, 1909, no more oil-tank cars will be used to freight trains through the San Joaquin Valley, and about 700 oil-tank cars will be released for service elsewhere.

PRODUCTION OF ENGLISH COMPANIES IN RUSSIA.

BAKU RUSSIAN PETROLEUM Co., LTD.—The production of crude oil for week ended May 25th was 198,000 poods, or 3,105 tons. The wells of the company were stopped for 5 days last week owing to a strike of workmen. The gross production of oil was 58,000 poods or 935 tons.

RUSSIAN PETROLEUM AND LIQUID FUEL Co., LTD.—The production for the week ended May 23rd was 247,000 poods, or 3,982 tons; and for the week ended May 30th was 249,000 poods, or 4,014 tons.

SPIES PETROLEUM Co., LTD.—The production for the week ended May 24th was 141,485 poods, or 2,282 tons. The output for the week ended May 31st was 151,725 poods, or 2,447 tons, of which well, No. 5, on plot Baskakoff, gave 18,845 poods, or 304 tons, the fountain having started spouting intermittently on the Friday evening previous. Fountain production from this well on June 1st, 9,405 poods, or 101 tons, and it still continues to spout.

THE EUROPEAN PETROLEUM Co., LTD.—The production for the week ended May 24th was 132,560 poods, or 2,137 tons; and for the week ended May 31st was 150,452 poods, or 2,425 tons.

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THE EARLY HISTORY OF THE ILLINOIS OIL FIELD.

An Authentic Account taken from Government Records.

The search for natural gas and petroleum in Illinois dates back to about the middle of the Nineteenth century, one or two bores yielding marsh gas having been drilled near Champaign in 1853. Near Lowell, in La Salle county, oil is reported to have been found a few years later.

CLARK COUNTY.—In the early "sixties," when the first oil excitement spread over the eastern United States, about a dozen bores were sunk eight miles north of Casey, Clark county, by parties from Chicago. The first of these was drilled on a farm then owned by T. R. Young, in section 17, Parker township.

Some of these wells were being drilled in 1865, and six were located on the Young, Robinson, Williams, Dr. Briscoe and John Briscoe farms in Parker township, between the towns of Oilfield and Westfield, and one on Blue Island in Westfield township. These early wells were drilled with the holes full with water, as but little, if any casing was used. This water held back the oil, so that no good showing was obtained. As a result, the drillers became discouraged and the attempt was abandoned. Enough oil was found in the vicinity to give the name Oilfield to the hamlet which sprung up during the excitement. This name, together with the stories of the older inhabitants, finally led to renewed drilling in 1904, which opened up the present lively Casey oil field. The results have amply shewn that it is not safe for any one to say with emphasis that neither gas nor oil will be found in any locality simply because a few shallow bores have proved barren. In Indiana and Illinois, where oil and gas occur in isolated pools and in several different rock formations, no man can say with certainty what the drill will reveal.

MONTGOMERY COUNTY.—Oil was discovered many years ago while prospecting for coal, and for some years a small production was maintained by skimming the oil off the water in a mine sump. At Litchfield, Montgomery county, about 105 miles west of Casey and 40 miles south of Springfield, about 1886 a number of wells were drilled for oil and gas. Both were found at a depth of 640 to 670 feet, "below the lower coal measures, bordering on the Devonian." About two and a-half miles south of Litchfield a large gas well was struck in 1882, the pressure of which was between 400 and 450 pounds to the square inch. This well was spoiled by salt water in 1884. The well was drilled dry and cased at 580 feet, with no salt water found in the gas sand; but after drilling down 200 feet further a heavy vein of salt water was struck. This could not be successfully plugged off, and finally drenched out the gas, which was reached at 640 feet.

The best gas was discovered at a depth of 666 feet. About seven miles of pipe was laid, ranging from three to eight inches in diameter, and the gas was supplied to about 500 stoves in Litchfield, being used chiefly for domestic purposes.

In 1889 some of the wells began to yield oil, the yield

being continued until 1903. In Mineral Resources of the United States for 1889, page 353, the following account of this oil production is given:—"The oil is a lubricating one, dark, almost black in colour, and of 22° B. specific gravity. The cold test is remarkable, the oil remaining fluid at 20 degrees below zero, Fahrenheit. It is largely used by the factories in the neighbourhood of Litchfield, and is sold to consumers at near-by points for lubricating purposes, bringing from eight to ten cents per gallon in bulk, according to quantity. In all, there have been thirty wells bored in the neighbourhood of Litchfield, chiefly for gas. The depth of these wells ranges from 640 to 670 feet. All save five were abandoned years ago.

These five wells continue to produce the character of petroleum mentioned above. The average production of these wells is about four barrels per day. They are pumped by heads, and one man attends to them all. Natural gas from wells near by is used to some extent in furnishing fuel for pumping the wells. The supply of gas is about equal to twelve tons of coal a year, and twelve tons additional are used in pumping. The supply of natural gas is gradually diminishing."

Between 1889 and 1903, when the production ceased, the total yield of oil from the Litchfield wells was as follows:—

Barrels.				Barrels.			
1889	..	..	1,460	....	1897	..	500
1890	..	..	900	....	1898	..	360
1891	..	..	675	....	1899	..	360
1892	..	..	521	....	1900	..	200
1893	..	..	400	....	1901	..	250
1894	..	..	300	....	1902	..	200
1895	..	..	200	....			—
1896	..	..	250	....	Total	..	6,576

CRAWFORD COUNTY.—The Crawford County Oil, Gas and Coal Co. was organised in the spring of 1900 for the purpose of developing the natural fuels of Crawford county. They started drilling in the south-east quarter of section 35, Robinson township, one and a-half miles east of Robinson, the county seat. At a depth of 820 feet, before the oil-bearing rock was reached, some salt water was encountered. At about that depth the bore began to cave, and was abandoned.

In the spring of 1901 the rig was moved to the Jones farm, one and a-half miles north of Robinson. Here a second bore was started in which a small supply of gas was found at 1,040 feet. This burned about eight feet above the casing. It was shut off, and the well drilled to a depth of 1,190 feet, where a strong vein of salt water prevented further drilling. Three additional attempts in the years 1901, 1902, and 1903, resulted in a loss of tools in the wells at depths between 900 and 1,000 feet.

A sixth bore in the spring of 1904 resulted in a small supply of gas and oil, at depths ranging between 900 and 1,100 feet. The bore was continued down to 1,340 feet, and there abandoned. The company, after expending more than \$10,000 without returns, finally gave up the search as useless; though in less than eighteen months

good productive oil wells were found within six miles of Robinson.

RANDOLPH COUNTY.—Near Sparta, in Randolph county, natural gas was found in June, 1888, and J. M. Nickles, writing in 1895, enumerated twenty-two wells which had been put down, of which the larger number produced some gas. The developed gas territory covered less than two square miles. The output for the year, 1889, was estimated at 120,000,000 cubic feet. The gas was found at a depth of 850 feet. It occurred in the Chester formation underlying the coal measures. The production gradually decreased and eventually ceased altogether.

In 1905 and the early part 1906 determined efforts were made to develop gas and oil at a number points in the State. These efforts were most successful in South-eastern Illinois, but in the southern and western parts of the State some encouraging results were obtained. In most of the localities either by reason of the small quantity as yet found or the absence of pipe lines, there was at the date mentioned no production. That portion of the State actually producing crude oil and natural gas in commercial quantities on May 1st, was mostly comprised in a strip of territory about 40 miles in length and 12 miles wide, extending from Westfield, Clark county, a little east of south to below Oblong, Crawford county. The present report is mainly devoted to this area.

The strip of territory mentioned comprises parts of three counties, viz., Clark Cumberland and Crawford, which lie on or near the eastern boundary line of the State, and a little south of its centre. It comprises a part of each of the following civil townships:—Westfield, Parker, Casey and Johnson of Clark county; Union and Crooked Creek of Cumberland county; and Prairie La Motte and Oblong of Crawford county. The centre of operations in Clark county is Casey, a thriving town of 1,800 population, situated on the Vandalia and C.H. and D. Railways, 35 miles west of Terre Haute, Ind., and 133 miles east of St. Louis; while in Crawford county, Robinson, the county seat, located 38 miles southwest of Terre Haute, on the Cairo division of the Big Four and the Illinois Central Railways, is the operating centre. The surface of the area producing oil is, in the northern and southern parts, mainly prairie with little deviation in level, while in the central part, along the streams, it is quite hilly or broken. Wherever bluffs or hills are found, they are the results of erosion. But few outcrops of rock occur within the oil field, and they are limestones, sandstones or shales of the carboniferous, exposed in gullies or along the streams where the water has eroded channels, through the drift and boulder clay everywhere covering the oil territory to a depth of from 15 to 100 feet.

But few of the roads of the oil territory have as yet been improved with either stone or gravel. As a result they are, from December 1st to April 5th, almost impassable for the heavy hauling necessary to the proper development of an oil field. For that reason the work must be mainly done in the remaining seven and a-half months of the year.

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AMERICAN PETROLEUM EXPORTS.

STATISTICS FOR APRIL.

According to the official publication of the Washington Bureau of Statistics, the exports of petroleum from America from the various ports during April were as under:—

	1907. Quantities. Gallons.	1908. Quantities. Gallons.
CRUDE—		
Baltimore	—	1,082,247
Boston and Charlestown..	—	—
Delaware	—	—
New York	2,900	4,010,195
Philadelphia	7,139,896	313,700
Galveston and Sabine ..	9,795	154,826
Totals	7,152,591	5,560,968
Total value for the month, 1907 ..	..	\$522,833
" " " 1908 ..	..	\$350,433
NAPHTHAS—		
Baltimore	—	636
Boston and Charlestown..	3,339	4,850
Delaware	—	—
New York	2,212,507	2,231,385
Philadelphia	1,813,719	2,785,393
Galveston	—	2,850
Totals	4,029,565	5,025,114
Total value for the month, 1907 ..	..	\$387,821
" " " 1908 ..	..	\$498,765
ILLUMINATING—		
Baltimore	496	413
Boston and Charlestown..	4,883	82,753
Delaware	—	—
New York	42,267,388	53,237,650
Philadelphia	19,279,838	30,511,962
Galveston	1,447,828	3,807,192
Totals	63,000,433	87,639,970
Total value for the month, 1907 ..	..	\$4,322,373
" " " 1908 ..	..	\$6,275,600
LUBRICATING—		
Baltimore	348,600	\$14,600
Boston and Charlestown..	20,426	11,069
Delaware	—	—
New York	9,217,532	7,974,546
Philadelphia	2,044,335	4,236,735
Galveston	1,012,001	14,310
Totals	12,642,894	12,751,260
Total value for the month, 1907 ..	..	\$1,587,514
" " " 1908 ..	..	\$1,693,329
RESIDUUM—		
Baltimore	—	—
Boston and Charlestown..	—	—
Delaware	—	—
New York	400,000	50,000
Philadelphia	7,036,906	427,491
Galveston	939,988	156,450
Totals	8,376,894	633,941
Total value for the month, 1907 ..	..	\$276,293
" " " 1908 ..	..	\$27,895
TOTAL MINERAL OILS—		
Baltimore	349,096	1,597,896
Boston and Charlestown..	28,648	98,672
Delaware	—	—
New York	54,100,327	67,503,776
Philadelphia	37,314,694	38,275,281
Galveston	3,409,612	4,135,628
Totals	95,202,377	111,611,253
Total value for the month, 1907 ..	..	\$7,096,834
" " " 1908 ..	..	\$8,846,022

YOKOHAMA PETROLEUM IMPORTS.

There were no imports of petroleum products into Yokohama during March, though for the corresponding period twelve months ago there were imported 1,229,397 gallons of a value of 245,880 yen. The imports of oil so far this year into Yokohama have amounted to 4,824,565 gallons, of a value of 1,004,456 yen.

The American Oil Market.

New York, Week ended May 23rd.

Development work has been stimulated generally in the Eastern fields despite the unfavourable weather conditions, and the aggregate of new production shews a substantial gain over that of the preceding week, especially in West Virginia, South-eastern Ohio and Illinois. Operations in West Virginia have been attended with some results of more than usual interest, the Follansbee pool of Brooke county shewing an increased production, and remaining well in the lead of districts in the lower South-west fields. The resources of this pool have been stimulated by shooting the old wells, as well as by bringing in an occasional good producer. The best of the new completions was one that was credited with a showing for 300 barrels a day, natural. This, as well as the other recent completions, which has contributed to the productiveness of the pool, has been encountered inside of the defined limits, within which several other tests regarded as promising of successful development, are now due. Further attempts to find a lead from this rich territory, says the *Oil, Faint and Drug Reporter*, have been unavailing. A late gauge of the Follansbee producers shewed a total of 2,665 barrels a day. The Holliday's Cove district in the same county is yielding, according to a late report, 1,425 barrels a day. Shooting has also been indulged in to keep the wells of this pool up to their good average. In the Wellsburg development of Brooke county a test in progress considerably in advance of production is regarded with close interest. The gusher that was drilled about two weeks ago in the Battelle district of Monongalia county, West Virginia, has shewn remarkable staying powers, a late report crediting it with 285 barrels a day. The record of this well holds interest in the possibilities of the neighbouring territory to a keen pitch, but so far later tests have disclosed nothing of a stimulating character. A revival of interest has been manifested in the Lima fields of North-western Ohio and Indiana, especially in the former section, with a corresponding increase in new production. Our Kentucky correspondent reports an expansion of drilling lines in that field, with the prospects for a more active season during the summer. In Wolfe county, especially, the advent of Pennsylvania and Ohio capitalists is expected to stimulate developments. Illinois operators are still handicapped by flooded roads, but in spite of this condition, completions for the week were almost double those of the former period, amounting to 99 with 10 dry holes. The new daily production amounted to 7,068 barrels, or 2,855 barrels more than was previously noted. The pipe line runs for the first 17 days of the month were unusually heavy at 1,591,999 barrels. Advices from the Mid-Continent field report some good producers in the Delaware shallow sand pool of Oklahoma, but operations there have been somewhat checked by the announcement that work on a proposed eight-inch pipe line to relieve the congestion would have to be delayed. The Bald Hill district of the State is also contributing materially to the new production.

REFINED AND PRODUCTS.—The export movement in the local market for refined has been stimulated to a further extent during the week, and this furnishes the only feature to distinguish the course of the market. Our record of clearances for the period shews a total of 17,163,130 gallons, while the previous aggregate involved 14,015,970 gallons. Of the former amount 5,550,000 gallons were forwarded in bulk. Chartering for forward account has remained light, and the only engagements reported were one of 180,000 cases for June shipment to Java, and one of 170,000 cases for China, June, New York loading, and one for an undeclared quantity for Philadelphia shipment to Havana. Values have remained on an unaltered basis, and there is no occasion to question the continued stability of the market. Conditions governing the market for the products shew no change from those that have prevailed of late, and while

the demand for motor consumption is assuming more seasonable proportions, the comparison with former seasons is rather unfavourable. Naphtha, however, continues to move freely into foreign channels, clearances for the week totaling 235,010 gallons, against 224,420 gallons as the former amount. Quotations may be repeated throughout.

CLOSING QUOTATIONS.

CRUDE.	In cents per gallon.	Week ended	
		May 16. 1908.	May 23. 1908.
Pennsylvania crude in bbls.	—	—
Pennsylvania crude in bulk	—	—
Residuum, bbls. for export	—	—

CRUDE AT THE WELLS.

The quotations for oil represented by credit balances were ;—

		Week ended	
		May 23. 1907.	May 23. 1908.
Pennsylvania	.. ..	\$1.78	\$1.78
Tiona	.. ..	1.78	1.78
North Lima	.. ..	0.94	1.04
South Lima	.. ..	0.89	0.99
Indiana	.. ..	0.89	0.99
Illinois, heavy, below 30 deg.	.. ..	—	0.60
Kansas and Indian Ter., 32 deg. and above	.. ..	0.41	0.41
Heavy	.. ..	0.28	0.28
Humble, Tex.	.. ..	—	0.64
Saratoga	.. ..	—	0.61
Sour Lake, Tex.	.. ..	—	0.64
Jennings, La.	.. ..	—	0.60
CANADIAN OIL :—			
Petrolia	.. ..	1.34	1.44
Oil Springs, less pipeage	.. ..	1.41	1.51

REFINED—FOR EXPORT.

	In cents.	Week ended	
		May 23. S.W.	May 23. W.W.
Barrels, cargo	.. .. per gal.	8.75	@ 10.75
Philadelphia	8.70	@ 10.70
Bulk, New York	5.00	@ 7.00
Bulk, Philadelphia	4.95	@ 6.95
Cases, New York	10.90	@ 13.90
Cases Philadelphia	10.85	@ 13.85

REFINED IN CASES—110 FIRE TEST.

		Week ended	
		May 16. 1908.	May 23. 1908.
3,000 to 10,000	.. ..	11.05	11.05
1,000 to 3,000	.. ..	11.10	11.10

REFINED—JOBBER LOTS

In barrels, pkgs included.

		Week ended	
		May 16. 1908.	May 23. 1908.
120 fire test, S.W.	.. in barrels	12	12
130 fire test, S.W.	.. ..	12½	12½
150 fire test, W.W.	.. ..	13½	13½
In bulk from tanks	.. ..	10	10
300 fire test	.. ..	13½ @ 14	13½ @ 14

NAPHTHA AND GASOLINE.

		Week ended	
		May 16. 1908.	May 23. 1908.
Naphtha, Auto, 65 @ 72 deg.	.. ..	14.00	14.00
Gasolene, 86 deg.	.. ..	23.00	23.00

PENNSYLVANIAN OIL RUNS from May 14th to May 20th were :— May 14th, 98,741; May 15th and 16th, 366,981; May 17th, 120,450; May 18th, 243,146; May 19th, 216,024; and May 20th, 102,866.

¹ Includes Illinois Oil.

THE DELIVERIES OF PENNSYLVANIAN OIL from May 15th to May 21st were :—May 15th, 150,909; May 16th, and 17th, 364,957; May 18th, 221,127; May 19th, 197,065; May 20th, 155,719; and May 21st, 237,690.

¹ Includes Illinois Oil.

CLEARANCES FOR THE WEEK.

During the week ended May 22nd and since Jan. 1, the clearances of petroleum, in gallons, from the port of New York, were as follows :—

		Week.	Year.	1907.
Refined	.. ..	17,163,150	231,648,195	211,279,290
Crude	.. ..	1,734,865	9,981,815	1,039,879
Naphtha	.. ..	235,040	4,261,905	2,397,370
Residuum	.. ..	2,850	647,350	322,700

EXPORT STATISTICS.

The total exports from the port of New York and from the United States have been :—

		Gallons.	
From New York, week ended May 22nd	.. ..	24,619,065	
Total from New York, from Jan. 1st, 1908	.. ..	332,179,409	
Same period last year	.. ..	275,563,591	
Increase	.. ..	56,615,818	
From United States, week ended May 22nd	.. ..	23,200,427	
Total from United States, since Jan. 1st, 1908	573,316,011	
Same period last year	500,517,739	
Increase	72,798,272	

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The "Review" Shipping List.

JUNE 5, 1908.

(The following abbreviations are used in this table:— L. Left; P. Passed; Arr. Arrived; Sp. Spoken, Fr. Trading.)

Vessel.	From	For.	Latest Date and Position.	Vessel.	From.	For	Latest Date and Position.
ALCHYMIST	London	Stockholm ..	L. May 31	ENERGIE	Philadelphia	Hamburg ..	L. May 30
ALEMBIC	Bilbao	Lisbon	Arr. May 11	ERIVAN	Batoum	Dunkirk ...	P. Constant'ple,
ALICE ISABELLE..	Sables	New York ..	Arr. May 29				May 29
	d'Olonne			EELKA	Fiume	Batoum	L. May 29
AMERICAN	Philadelphia	New York ..	Arr. May 24	EUPLECTELA	Samboe	Shanghai ..	L. May 20
APPALACHEE	Moji	San Francisco	Arr. May 28	EXCELSIOR	New York ..	Rotterdam ..	L. May 26
APSCHERON	Batoum	Rouen	P. Tarifa,	EZIO	—	—	Coasting Peru
			May 29	FRANCE MARIE ..	New York ..	Tarragona ..	L. May 16
ARAL	Rotterdam ..	Tyne	Arr. May 8	GEESTEMUNDE ..	Hamburg ..	Philadelphia	L. Tyne,
ARAS	Blyth	Philadelphia	Arr. June 2				June 3
ARGYLL	—	—	Coasting U.S. (Pacific)	GENESSE	New Orleans	Liverpool ..	P. O. Hd. Kinsale,
							June 3
ASHTABULA	San Francisco	Hankow	At Shanghai,	GEORGIAN	Tyne	Novorossisk	P. Dungeness,
			May 5	PRINCE			June 1
ASTRAKHAN	Tyne	Philadelphia	P. Butt of Lewis,	GOLDMOUTH	Singapore ..	Europe	P. Perim,
			May 28				May 30
ATLAS	—	—	Coasting U.S. (Pacific)	GUTHEIL	Philadelphia	Hamburg ..	Arr. May 24
AUGUSTA	Baltimore ..	Belfast	L. May 26	HAINAUT	Antwerp	Patras	P. Sagres,
AUGUST KORFF ..	Philadelphia	Manchester	L. May 30				May 28
AUREOLE	Bremerhaven	Antwerp	In Port, June 2	HARRY	Port Arthur	Birkenhead ..	L. Norfolk (Va.),
AZOV	—	—	Trading on W.C. of South Amca.	WADSWORTH	(Texas)		May 26
				HELIOS	New York ..	Rotterdam ..	L. May 26
BAKU STANDARD	Novorossisk	London	P. Constant'ple,	HERMIONE	Hamburg ..	Philadelphia	P. Lizard,
			June 1				May 21
BALAKANI	London	Port Arthur	Arr. June 1	HOTHAM	Penarth	Kustendje ..	Cld. Constant'ple,
		(Texas)		NEWTON			May 27
BATOUM	Thameshaven	Philadelphia	L. Portland,	IMPERIAL	—	—	Tr. on Lakes btn.
			May 26				U.S.A. and Can.
BAYONNE	Granatello ..	Batoum	Cld. Constant'ple,	IOANNIS COUZIS	Cardiff	Kustendje ..	L. May 27
			May 26	IROQUOIS	London	New York ..	In Wireless Com.,
BEACON LIGHT ..	New York ..	Havana	L. May 29	J. B. AUG. KESSLER	Samboe	Rotterdam ..	Browhd., June 2
BLOOMFIELD	Penarth	Antwerp	In Port, June 2	JAMES BRAND	Port Arthur	Manchester	In Port, May 31
BORJOM	Alexandria ..	Batoum	P. Dardenelles,		(Texas)		L. May 27
			May 25	JULES HENRI	Marseilles ..	New York ..	P. Tarifa,
BRILLIANT	Philadelphia	Stettin	Sp. May 27, 40 N,				April 30
			61 W	KURA	Hull	Philadelphia	P. Dunnet Head,
BROADMAYNE	Tyne	—	P. Gibraltar,				May 18
			May 27	LA CAMPINE	Antwerp	Philadelphia	P. Scilly,
BULLMOUTH	Shanghai ..	Balekappan	L. May 23	LA FLANDRE	Ghent	Philadelphia	May 23
BULYSES	Soesoe	Samboe	L. May 27	LA HESBAYE	Antwerp	Philadelphia	P. Lizard,
BURGERMEISTER	Aarhuus	New York ..	L. Tyne,				May 20
PETERSEN			June 3	LACKAWANNA	New York	Messina	Off the Wight,
BUYO MARU	Philadelphia	Madras and	P. Perim,		and Algiers		May 25
		Calcutta	April 29	LANSING	San Francisco	Taltal	L. Algiers,
CALCÚTTA	San Francisco	Shanghai ..	Arr. abt. April 21	LE COQ	—	New York ..	May 29
CAPTAIN A. F.	Hamburg ..	New York ..	P. Nantucket,	LOUTSCH	—	New York ..	L. May 23
LUCAS			May 28	LUCERNA	Rouen	Odessa	Arr. June 2
CARDIUM	Balekappan	Hankow	Arr. May 26	LUCILINE	—	New York ..	In Port, May 6
CATANIA	Seattle	San Francisco	Arr. May 7			Batoum	Arr. June 1
CAUCASIAN	Pera	London	Arr. Purfleet,	LUMEN	Port Talbot	Batoum	P. Pera,
			June 3				June 2
CHARLOIS	Amsterdam ..	Philadelphia	Off the Wight,	LUX	—	New York ..	P. Gibraltar,
			May 24	MAKKAWEI	Kustendje ..		May 25
CHESAPEAKE	Liverpool ..	New York ..	L. May 31			Cette	Arr. May 30
CHESTER	Baltimore ..	Antwerp	P. Cape Henry,	MANHATTAN	Antwerp	Cardiff	Cld. Constant'ple,
			May 25	MANNHEIM	Philadelphia		May 28
CIRCASIAN	—	—	Trading on W.C. of South Amca.	MARGARETHA ..	Genoa	Hamburg ..	In Port, June 2
PRINCE				METEOR	Thameshaven	Batoum	L. May 27
CITY OF EVERETI	Philadelphia	London	L. May 23, towing		& Portland		L. June 1
			S.O. Co. Barge	MEXICAN PRINCE	Kustendje ..	Rouen	L. Portland,
			No. 94	MIRA	Port Arthur	Hamburg ..	May 23
CINDAD DE RENS	Rouen	Philadelphia	Arr. May 28		(Texas)		L. June 2
CLAM	Ibrail	Vallo	P. Sagres,	MUREX	Balekappan	Hong Kong ..	In Port, June 2
		(Norway)	May 31	NARRAGANSETT ..	London	New York ..	L. May 25
COL. E. L. DRAKE	San Francisco	Seattle	Arr. May 20				P. Lizard,
COWRIE	Rotterdam ..	—	P. Sagres,	NERITE	—	—	May 30
			May 26				Tr. in China
CUYAHOGA	Philadelphia	Calcutta	P. Del. Break.,				Seas
			May 24	NEW YORK	New York ..	Rotterdam ..	Arr. June 1
CYMBELINE	Amsterdam ..	Port Arthur	P. Dungeness,	OAKWOOD	Liverpool ..	Cienfuegos ..	L. May 15
		(Texas)	June 1	OBERON	Hamburg ..	Philadelphia	Arr. May 26
CZAR NICOLAI II.	Batoum	Hamburg ..	In Port, June 2	OCEAN	Antwerp	Philadelphia	P. Scilly,
DAGHESTAN	Batoum	Hamburg ..	In Port, June 2				May 26
DAKOTAH	Balekappan	San Francisco	L. May 20	OILFIELD	London	Black Sea ..	L. June 4
DELAWARE	Plymouth ..	Philadelphia	Arr. May 26	ORIFLAMME	—	Havre	Arr. May 31
DERBENT	Batoum	Antwerp	In Port, June 2			& Rouen	
DEUTSCHLAND ..	Stettin	New York ..	Arr. May 25	OTTAWA	Sabine &	Liverpool ..	In Port, June 2
DIAMANT	Rotterdam ..	New York ..	Off the Wight,	OURAL	Newport Nws	Batoum	L. Gibraltar,
			May 25		Manchester ..		June 2
EDWARD	Hull	Galveston ..	Arr. May 26	PALEMBANG	—	—	Tr. East Indies &
DAWSON							China Seas
ELAX	Cochin	Scscoe	Arr. May 27				
ELISE MARIE	Tyne	New York ..	L. May 25				

Vessel.	From	For.	Latest Date and Position.	Vessel.	From.	For.	Latest Date and Position.
PAULA	Tyne	Philadelphia	P. Butt of Lewis, June 3	SOYO MARU	Yokohama ..	Gaviota	Arr. May 19
PECTAN	Philadelphia	London	In Port, June 2	SPONDILUS	Samboe	Europe	P. Perim, June 2
PENNOIL	Philadelphia	Dover	Off the Wight, June 2	STANDARD	Danzig & Tyne	New York ..	Arr. June 1
PERLAK	Singapore ..	Soesoe	L. April 14	STROMBUS	Thameshaven	New York ..	Arr. May 31
PHOEBUS	New York ..	Hamburg ..	L. May 23	SULTAN VAN LANGKAT	Hong Kong	Palembang..	L. May 4
PINNA	Yokohama ..	Gaviota	L. June 2	SUN	Philadelphia	Sabine Pass	P. Sand Key, May 28
POTOMAC	Manchester	Philadelphia	Arr. May 28	SUNLIGHT	Philadelphia	Calais	P. Del. Break, May 4
PROMETHEUS....	Rotterdam..	New York ..	Arr. June 2	SURAM	Newport	Port Arthur (Texas)	P. Fastnet, May 15
PROGRESSO ARGENTINA	Port Arthur (Texas)	Buenos Ayres	L. Mar. 13	SUWANEE	Sunderland ..	Kustendje ..	P. Sagres, May 23
PRUDENTIA	Hong Kong	Balekappan	L. May 16	SVIET	Batoum	Odessa	L. May 14
QUEVILLY	Rouen	New York ..	L. Havre, May 2	TELENA	Singapore ..	Barrow	Arr. May 31
RION	Philadelphia	Batoum	L. Piræus, May 30	TEREK	—	Philadelphia	P. Dunnet Head, May 16
ROCK LIGHT	Kustendje ..	London	P. Gibraltar, June 2	TIFLIS	Antwerp	Batoum	L. May 30
ROMANY	Palembang..	Kobe	L. May 22	TIOGA	Port Arthur (Texas)	London	In Port, June 3
ROTTERDAM	Rotterdam ..	New York ..	P. Prawle Pt., May 24	TONAWANDA	San Francisco	Muroran....	L. May 18
RUSSIAN PRINCE SALAHADJI	Tampico	Philadelphia	Arr. May 24	TROCAS	Suez	Balekappan	L. Colombo, May 22
SAN CRISTOBAL..	Rochester ..	Minatitlan ..	P. Sand Key, April 9	TUSCARORA	Singapore ..	San Francisco	In Port, May 22
SAN IGNACIO DE LOYOLA	Philadelphia	Pasages	P. Del. Break., May 12	VEDRA	Palembang..	Nagasaki....	L. Singapore, April 24
SANTA MARIA....	Astoria	Pt. San Luis	L. May 19	VILLE DE DIEPPE	Philadelphia	Rouen	L. May 30
SANTA RITA	Panama	Port Harford	Arr. May 18	VOLUTE	Soesoe	Samboe	Arr. prev. May 27
SAXOLEINE	New York ..	Blaye	L. May 24	WASHINGTON....	Kustendje ..	Bombay	Arr. May 26
SEMINOLE	San Francisco	Hankow	L. May 4	WEEHAWKEN	Liverpool ..	New York ..	Arr. June 1
SERVIAN	Algiers	London	L. June 1	WILLKOMMEN....	Philadelphia	Swinemunde	P. Del. Break, May 19
SINGU	—	—	Tr. in East Indies	WINNEBAGO	Shanghai ..	Moji	Arr. May 17
SNOWFLAKE	Philadelphia	Skanlevig ..	Arr. June 1				

Latest Market Intelligence.

LONDON OIL MARKET.

Supplied by Messrs. Benjamin & Gee, 31, St. Mary Axe, E.C.

June 5th, 1908.

The prices of Petroleum are as per our last report, namely, Russian, 5 $\frac{7}{8}$ d. to 6d.; American, 6 $\frac{1}{2}$ d. to 6 $\frac{5}{8}$ d.; Water White, 7 $\frac{1}{2}$ d. to 7 $\frac{3}{8}$ d.; Roumanian, 6 $\frac{3}{4}$ d.

LUBRICATING OILS.

These are quoted as follows:—

American pale, £7 2s. 6d. to £10 15s.
American dark cylinder, from £8 10s.
American filtered cylinder, from £11 15s.
No. 1 Russian, £10 5s.

TURPENTINE.

Turpentine has since our last report slightly receded in price, the present quotations being:—American Spot, 31s.; June to August, 30s. 9d.; July to December, 31s. 3d.; September to December, 31s. 6d.; January to April 32s. 6d.

LIVERPOOL OIL MARKET.

June 5th.

Refined oils are quiet, and sellers quote 6 $\frac{3}{4}$ d. for Russian, Galician or Roumanian; and 7 $\frac{1}{4}$ d. to 8 $\frac{1}{4}$ d. per gallon for American.

PETROLEUM SPIRIT continues at 1s. 0 $\frac{1}{2}$ d. to 1s. 3d. per gallon for American deodorised, according to quality on the spot.

LATEST AMERICAN PRICES.

NEW YORK, June 5th.

Refined, in cases, is steady at 10.90; Standard White, 8.75; Credit balances, 1.78c.

PHILADELPHIA, June 5th.

Standard White is still quoted at 8.70.

RUSSIA.

BAKU, June 1st.

The Baku oil market is unchanged. Crude oil, spot, 22 $\frac{1}{2}$ copecs per pood. Residuals, future delivery, 23 $\frac{1}{2}$ copecs. Kerosene, in ships, 30 copecs.

BELGIUM.

ANTWERP, June 1st.

The petroleum market is firm. Price of Standard White, spot, 22 francs per 100 kilos.

FRANCE.

PARIS, June 1st.

Illuminating oil is quoted in bulk, in whole tank waggons, 21 francs per hectolitre; spirit, 31.75 francs per hectolitre. Special white oil, in barrels or cans, 29 francs per hectolitre.

GERMANY.

HAMBURG, June 1st.

The kerosene market is quiet. The price of American Standard White is 7.55 marks per 50 kilos; Russian, 7.35 marks.

ROUMANIA.

June 1st.

Crude oil from different fields, including pipe line charges, per 100 kgs. ... 4.40-4.60
Refined oil, exclusive of taxes, ex. refinery... 8.00-9.00
Benzene, 717-720, including taxes ... 20.00
Benzene, 750-760 ... 15.00-15.50
Residuals in tank waggons, at refinery ... 3.90-4.00
Paraffin ... 120.00

PRICES FOR EXPORT.

Refined oil, f.o.b., per 100 kgs. ... 7.50-8.00
Benzene, sp. gr. 0.710-0.715, f.o.b. ... 17.00-18.00
" sp. gr. 0.715-0.720 " ... 15.00-16.00
" sp. gr. 0.730-0.740 " ... 10.00-11.00
" sp. gr. 0.745-0.755 " ... 9.00-10.00

INDIA.

BOMBAY, May 15th.

The market is firm.

Standard Oil Co., of New York.

Current rates are:—

American, "Snowflake," 150 deg. Rs. 6 4 2
" Chester, 76 deg. 4 12 2
" Monkey Brand, 76 deg. 4 6 2
" Bulk, 125 deg. (in local made tins) .. 3 14 0
" 125 deg. (8 Imperial gallons) .. 3 4 0

The Asiatic Petroleum Company, Limited.

Current rates are:—

Burmah, bulk, loose, "Swan," per unit .. 2 14 0
" " new, tins, "Swan," per pair .. 3 8 0
Russian, bulk, loose, "Rising Sun," per unit .. 3 6 0
" " new, tins, "Rising Sun," per pair .. 4 0 0
" Anchor," cases, per case .. 4 8 0

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IMPORTS of PETROLEUM into UNITED KINGDOM

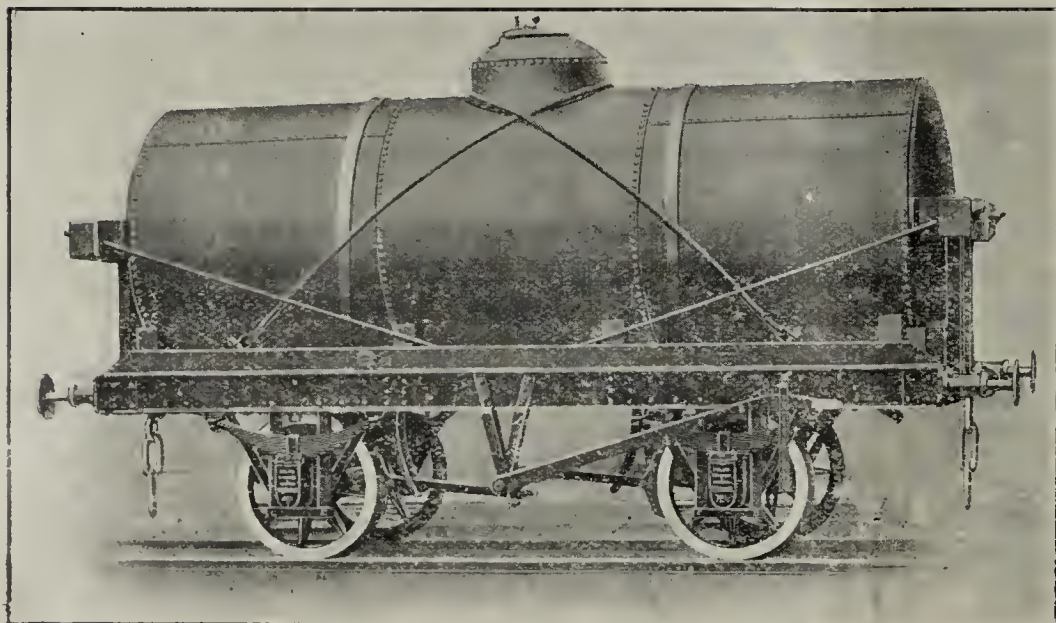
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FOR THE WEEK ENDED 25TH MAY, 1908—

DATE.	PORT AND IMPORTERS.	DESCRIP- TION.	NO. OF GALS.	PORT WHENCE.
May. LONDON—				
19	Lunham and Moore..	.. Lub.	10	New York
19	A. Brown and Co. ..	.. "	6,400	Philadel.
20	Fielder, Hickman and Co...	.. "	11,520	New York
20	London & India Docks Co..	Lub. Oil and Gr.	440	"
21	T. H. Lee .. ..	.. Lub. Gr.	170	Hamburg
21	London and India Dock Co.	Lub.	1,365	"
21	" .. ..	.. "	4,420	"
21	N. J. Fenner & H. Balder Co.	.. "	5,000	"
21	G. Haller and Co. ..	.. "	80	Antwerp
21	Page, Son and East ..	.. Lub. Gr.	80	"
21	J. Harrison .. ..	.. Lub.	130	"
21	J. Spurling .. ..	.. Lub. Oil and Gr.	335	New York
22	Anglo-American Oil Co. (Narragansett)	Lamp	2,568,990	"
22	"	Lub.	424,020	"
22	A. Brown and Co. ..	.. "	2,400	Philadel.
22	Argo Steamship Co. ..	.. "	240	Bremen
22	Lubricating & Fuel Oils, Ltd. (Tiflis)	.. "	21,500	Batoum
22	"	Black oil	50,000	"
22	"	Lub.	206,750	"
22	T. H. Lee .. ..	.. Lub. Gr.	1,560	Hamburg
22	Wilkins, Campbell and Co.	.. "	25	Brussels
23	Schlieman's Oil Works ..	Lub.	4,800	St. Petersburg
25	Argo Steamship Co. ..	.. "	150	Bremen
25	T. H. Lee .. ..	.. "	130	Hamburg
25	London and India Docks Co.	.. "	900	"
25	Page, Son and East ..	.. "	480	Antwerp
25	"	Lub. Gr.	40	"
25	Union Lighterage Co. ..	Lub.	1,490	"
25	Ragosine and Co. ..	.. "	200	"
25	Scott's Wharf .. ..	.. "	2,600	New York
25	London and India Docks Co.	.. "	6,200	"
25	Anglo-American Oil Co. ..	.. "	24,800	"
25	Anglo-American Oil Co. (Iroquois)	Lamp	2,208,000	"
25	"	Gas	341,430	"
LIVERPOOL—				
19	W. H. Nott and Co. ..	Lub.	260	"
19	Jas. Light and Sons ..	Lub. Gr.	900	"
19	"	Lub.	1,000	"
20	Meade-King, Robinson & Co.	.. "	4,720	"
20	Pickfords, Ltd. .. ..	.. "	70	Hamburg
21	Bramwell, Fern and Co. (Oural)	.. "	115,740	Batoum
21	"	Resid.	59,660	"
21	Meade-King, Robinson & Co. (Oural)	.. "	59,660	"
21	"	Lub.	115,740	"
23	Vacuum Oil Co. .. ..	.. "	7,840	New York
23	D. Currie and Co. .. ..	.. "	60	Hamburg

DATE.	PORT AND IMPORTERS.	DESCRIP- TION.	NO. OF GALLS.	PORT WHENCE.
May				
25	Meade-King, Robinson & Co.	Lub.	5,200	Baltimore
25	"	"	8,600	"
25	"	"	1,000	Hamburg
25	Pickfords .. ..	.. Lub. Oil and Paste	250	"
25	C. C. Wakefield .. ..	.. Lub. Gr.	480	Antwerp
25	C. W. Field .. ..	.. Lub.	80	"
25	W. B. Dick and Co..	.. Lub. Gr.	160	"
25	Valvoline Oil Co. ..	.. Lub.	2,050	New York
BRISTOL—				
19	E. Stock and Sons..	.. "	1,000	Hamburg
20	Pickford's, Ltd. ..	.. Lub. Oil and Paste	450	"
20	H. Pritchard and Co.	.. Lub.	1,260	New York
22	British Petroleum Co.	.. "	500	Antwerp
CARDIFF—				
19	Collins and Co. ..	.. "	3,000	Philadel.
GRIMSBY—				
20	J. Sutcliffe and Sons	.. "	165	Antwerp
23	" .. ..	.. "	400	Hamburg
HULL—				
19	T. Wilson, Sons and Co. ..	.. "	25,400	New York
19	" .. ..	.. "	120	Stockholm
19	Wilsons and N.E. Railway Shipping Co.	.. "	1,000	Hamburg
19	" .. ..	.. "	1,820	"
21	" .. ..	.. "	160	"
21	T. Wilson, Sons and Co. ..	.. "	65,560	New York
MANCHESTER—				
19	Worthington and Boler ..	.. "	1,510	Philadel.
21	A. Knudsen .. ..	.. "	80	Stettin
21	Meade-King, Robinson & Co.	.. "	12,000	Philadel.
21	" .. ..	.. "	13,000	"
21	" .. ..	.. M. Colza	2,000	"
23	Geo. B. Taylor .. ..	.. Lub.	12,400	"
22	Manchester Liners ..	.. "	2,600	"
22	Meade-King, Robinson & Co. (Oural)	.. "	183,000	Batoum
22	" .. ..	.. "	2,000	"
22	Bramwell, Fern and Co. ..	.. "	183,000	"
22	" .. ..	.. "	2,000	"
22	Homelight Oil Co. (Bloomfield)	Lamp	1,041,440	"
NEWCASTLE—				
19	Tyne-Tees S.S. Co..	.. Lub.	2,320	Antwerp
19	" .. ..	.. "	3,520	Hamburg
GLASGOW—				
19	Clyde Shipping Co..	.. Lub. Gr.	400	Antwerp
23	J. and A. Allan Lub.	62,050	Philadel.
LEITH—				
19	J. Currie and Co. "	220	Hamburg
21	" "	300	"

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— QUOTATIONS ON APPLICATION.

IMPORTS.—(Concluded).

DATE.	PORT AND IMPORTER.	DESCRIPTION.	NO. OF GALLS.	PORT WHENCE.
May	LEITH—			
21	J. Currie and Co. ..	Lub.	400	Hamburg
21	Henderson and McIntosh ..	"	5,200	Philadel.
	BELFAST—			
20	Anglo-American Oil Co. (Oklahoma)	Lamp	1,245,780	New York
21	J. C. Pinkerton and Co. ..	Lub.	60	Hamburg
	DUBLIN—			
23	Anglo-American Oil Co. (Oklahoma)	Lamp	1,837,480	New York
	Add to correct—		10,993,720	
	MANCHESTER—			
13/4	Anglo-American Oil Co. (Cuyahoga)	Lamp	19,580	Philadel.
	BARROW—			
18/4	Anglo-American Oil Co. (Weehawken)	Benzine	27,870	Kustendje
	Deduct to correct:—			
	BARROW—			
18/4	Anglo-American Oil Co. (Weehawken)	Naphtha	60,250	"
	LIVERPOOL—			
11/4	Meade-King, Robinson & Co.	Lub.	1,520	Philadel.
	MANCHESTER—			
8/5	Anglo-American Oil Co. (August Korff)	"	9,200	"
	Total for Week ..		10,970,200	

FOR THE WEEK ENDED 1ST JUNE, 1908—

	LONDON—			
26	London and India Docks Co.	Lub.	390	Hamburg
26	" ..	"	2,330	"
26	" ..	"	510	"
26	B. Jacob and Sons ..	"	8,380	Philadel.
26	H. Funck and Co. ..	"	4,000	"
26	Felder, Hickman and Co. ..	"	5,200	New York
26	" ..	Lub. Gr.	600	"
26	Mercantile Lighterage Co. ..	Lub.	32,750	"
27	Homelight Oil Co. (Oilfield)	Lamp	1,230,980	Batoum
27	Motor Fuel, Ltd. (Oilfield) ..	Benzine	286,000	Constantza
27	Silvertown Oil Storage Co. ..	Lub.	2,400	Philadel.
27	H. Funck and Co. ..	"	9,600	"
27	London and India Docks Co.	"	280	New York
27	Mordaunt Bros. ..	"	13,100	"
28	Page, Son and East ..	Lub. Gr.	120	Antwerp
28	" ..	Lub.	440	"
28	Squire and Calver ..	"	2,000	Trieste
28	Juett and Cain ..	"	4,800	"
28	Ragosine and Co., Ltd. ..	"	1,200	"
28	Bowring Petroleum Co. ..	"	2,870	"
28	Worthington and Boler ..	"	4,400	"
28	Ocean Oil Co. ..	"	4,000	"
29	Trinidad Lake Asp. Pav. Co.	"	2,400	"
29	Anglo-American Oil Co. (Tioga)	Fuel	581,840	Sabine
29	" ..	Gas	93,750	"
20	H. Funck and Co. ..	Lub.	14,800	Philadel.
29	Produce Brokers' Co. ..	"	25,280	"
29	Mordaunt Bros. ..	"	7,750	"
29	" ..	"	4,000	Trieste
30	H. Finkler and Co. ..	Resid.	4,000	"
30	Produce Brokers ..	"	6,000	"
30	Anglo-American Oil Co. ..	Lub.	13,200	Philadel.
30	H. and G. Dutfield ..	Lub. Gr.	200	"
30	Union Lighterage Co. ..	Lub.	24,075	"
June.				
1	Lubricating & Fuel Oils, Ltd.	"	5,330	"
1	Livett Frank and Son ..	"	1,730	"
1	Schlieman's Oil Co. ..	"	4,000	St. Petersburg
1	Ragosine and Co. ..	"	5,630	"
1	J. C. Goodall ..	"	40	Antwerp
1	Page, Son and East ..	Lub. Gr.	80	"
1	T. H. Lee ..	Lub. Oil and Gr.	50	Hamburg
1	M. Record ..	Lub.	5,000	"
1	Asiatic Petroleum Co. ..	Lamp	100	Cologne
1	H. P. Wheatley and Co. ..	"	350,000	Hamburg
May	LIVERPOOL— (Neerlandia)			
26	G. B. Taylor ..	Lub.	480	New York
26	W. Gibson and Sons ..	Lamp	2,050	"
28	W. B. Dick and Co. ..	Lub.	10,000	Philadel.
28	" ..	Lub. Gr.	10,000	"
28	Bowring Petroleum Co. ..	Lub.	2,090	"
28	Meade-King, Robinson & Co.	"	51,400	"
28	" ..	"	5,600	Baltimore
29	" ..	"	5,000	New York
29	Anglo-American Oil Co. (Ottawa)	Gas	981,770	Sabine
29	American Line ..	Lub.	6,000	Philadel.
29	George B. Taylor ..	"	8,960	"
29	Worthington and Boler ..	Lub. Oil and Gr.	200	"
30	Midland Railway ..	Lub.	980	"
30	Ismay, Imrie and Co. ..	"	240	New York

DATE.	PORT AND IMPORTERS	DESCRIPTION.	NO. OF GALLS.	PORT WHENCE.
May				
30	Valvoline Oil Co. ..	Lub.	4,100	New York
June				
1	Burnaby and Chantrell ..	Lub. Gr.	1,460	"
1	Vacuum Oil Co. ..	Lub.	3,600	"
1	Crew, Levick and Co. ..	"	11,570	Philadel.
1	" ..	M. Colza	5,720	"
May	BRISTOL—			
26	Pickford's, Ltd. ..	Lub. Oil and Gr.	850	Hamburg
26	" ..	Lub.	240	Antwerp
27	W. Smith and Co. ..	"	26,480	New York
27	H. R. James and Sons ..	"	400	"
29	E. Stock and Sons ..	"	1,000	Hamburg
June				
1	Pickfords ..	Lub. Oil and Gr.	510	"
	BARROW—			
1	Asiatic Petroleum Co. (Teland)	Spirit	1,729,940	Pulo Samboe
May	CARDIFF—			
26	Meade-King, Robinson & Co.	Lub.	2,750	Philadel.
	GRIMSBY—			
28	J. Sutcliffe and Son ..	"	20	Antwerp
30	" ..	"	120	"
	HARWICH—			
26	D. Howard ..	"	80	"
26	" ..	"	75	"
28	" ..	"	520	"
28	" ..	"	160	"
	HULL—			
27	W. Gilyott and Co. ..	"	50,560	"
27	T. Wilson, Sons and Co. ..	"	8,000	Trieste
28	" ..	Tar Oil	440	Gotthenburg
28	" ..	Lub.	1,400	Copenhagen
28	Wilsons and N.E. Railway Shipping Co.	"	10,720	Hamburg
28	" ..	"	120	Ghent
28	" ..	"	6,640	Antwerp
	MANCHESTER—			
28	C. H. Morton and Sons ..	"	1,200	Philadel.
28	Crew, Levick and Co. ..	"	19,660	"
28	J. T. Fletcher and Co. ..	"	100	Antwerp
June				
1	G. B. Taylor ..	"	38,000	New York
May	MIDDLESBRO—			
27	E. Harris and Co. ..	"	280	Antwerp
	NEWCASTLE—			
26	Tyne-Tees Steamship Co. ..	"	400	"
26	" ..	"	120	Hamburg
	NEWPORT—			
30	H. Martin ..	"	1,000	New York
30	A. J. T. Goss ..	"	6,000	"
	PLYMOUTH—			
27	T. Nicholson and Co. ..	"	180	Hamburg
	GLASGOW—			
28	Anchor Line ..	"	20,130	New York
June				
1	" ..	M. Colza	3,400	New York
1	" ..	Lub.	30,840	"
	GRANGEMOUTH—			
28	J. Currie and Co. ..	L. Paste	380	Hamburg
28	" ..	Lub.	1,880	"
28	" ..	"	3,400	"
28	" ..	"	1,200	"
29	W. Graham-Yooll and Co. ..	Lamp	4,000	"
29	J. Currie and Co. ..	L. Paste	250	"
29	" ..	Lub.	1,000	"
29	" ..	"	2,080	"
	LEITH—			
26	J. Currie and Co. ..	"	240	Bremen
26	J. Cormack and Co. ..	"	2,000	Riga
28	W. Graham-Yooll and Co. ..	Lamp	3,580	Hamburg
	BELFAST—			
3/4	Palgrave, Murphy and Co. (Delayed by query)	Gas (Suram)	1,205,330	Kustendje
	Add to correct—		7,064,500	
	LIVERPOOL—			
13/5	Meade-King, Robinson & Co.	Mot. Spt.	1,580	Rotterdam
	MANCHESTER—			
9/4	Meade-King, Robinson & Co.	Lub.	4,290	Batoum
	Deduct to Correct—			
	LIVERPOOL—			
9/4	Anglo-American Oil Co. (Cuyahogo)	Lamp	29,030	Philadel.
8/5	T. Wilson Sons and Co. ..	Lub.	13,160	New York
	MANCHESTER—			
	Anglo-American Oil Co. ..	Gas	7,430	Sabine
	HULL— (Genesee)			
27/5	Thos. Wilson, Sons and Co.	Lub.	2,000	Trieste
	Total for the Week ..		7,018,750	
	Total for the Fortnight ..		17,988,950	
	NOTE:—			
	MANCHESTER—			
2/4	Meade-King, Robinson & Co.	Gas	364,000	Pt. Arthur
	Should be — (Mira)			
2/4	" ..	Lamp	471,840	"

The Petroleum Review.

By PAUL DVORKOVITZ.

Vol. XVIII. (New Series.)

JUNE 20TH, 1908.

No. 427.

THE PETROLEUM REVIEW:

The ANNUAL SUBSCRIPTION for both English and Foreign readers is 26s., including Postage. Single Copies may be had at the offices at 1s.

The Editor would esteem it a favour if readers, when communicating with the various firms advertising in our pages, would mention the "Review."

Contributions upon items of interest are always welcomed from subscribers, but in each case these should be accompanied with the name and address of the sender, not necessarily for publication.

Editorial Notes.

There have been few chairmen of *The Spies* Anglo-Russian oil companies who have had reason to feel so proud of being able to explain the position of their company to the shareholders as was Mr. J. Annan Bryce, M.P., when he presided at the annual meeting of the Spies Petroleum Co., on Thursday afternoon. In the past, the Spies Co. has had its disasters and difficulties, but to-day a clearer atmosphere prevails. Not only has a $7\frac{1}{2}$ per cent. dividend been declared, but the shareholders have justifiable hopes of receiving a considerably larger return for their capital as a result of the operations for the present twelve months. There is one thing which we must in fairness say about Mr. Annan Bryce and his colleagues on the Spies directorate. They have all along adopted a consistent policy, the effect of which is just commencing to be seen. Upon every occasion when opportunity warranted, the directors have acquired additional holdings in the Grosny field, and, what is more, they have strained every nerve to bring about their proper development. That this course was a proper one to pursue, is seen from the fact that the very large production which the company has had during the past few months has mainly come from the yield of wells upon the new plots, prominent among which is the Baskakoff plot. The REVIEW has always urged upon all concerned, the absolute necessity which exists for the carrying out of an active drilling programme, and had other companies followed the wise example of the Spies Petroleum Co. and developed their territory as much as was possible with the funds at their disposal, we should to-day see quite different balance sheets to those which come before Anglo-Russian shareholders for adoption. We congratulate the Spies directors upon the success achieved, and hope that the result of the present year's operations will prove even more acceptable to the shareholders.

The recent decision which has been arrived at by the employes engaged in the shipbuilding trades is of more than usual importance to those engaged in the oil trade. When the strikes commenced to assume a serious character in the

various shipbuilding centres in this country, it became evident that the oil trade would suffer to a very great extent if the struggle were of a prolonged nature. To-day, more than a dozen oil-tankers are in course of construction, and the delay which has been created by the unfortunate struggles of labour against capital is now having its full effect, for tankers which, it was presumed, would be in service during this month, are still on the stocks. The general return of the men to work therefore, is a matter for which many will utter a sigh of relief, for the recent labour trouble has done much to bring about a continuance of that abnormal state of affairs which has for many months now been a feature in the oil-tanker chartering trade.

Though Lord Ribblesdale, the chairman of the Assam Oil Co., had somewhat of a difficult task on Wednesday when he met the company's shareholders, there was much in what he said which must have met with the approval of those present. At the back of the room was a long length of six-inch casing which had been drawn from one of the company's wells, and though the ends assumed their original shape, being quite circular, the centre of the tubing was as flat as the proverbial pancake. The Assam Co. has certainly had more than its fair share of misfortunes during the past year, and that length of battered casing, though of no use in an oil well, certainly served a very useful purpose at the meeting. It convinced the shareholders of the troubles and difficulties which beset the searcher after oil, and of the continuous care, backed with the very best of materials, which must be exercised before well borings reach that stage which entitles them to be termed producing wells. The Assam Co.'s production for the past year has not been as large as that obtained during 1907 on account of the unfortunate difficulties encountered while drilling, yet it is very gratifying to know that the prospects were never brighter than to-day.

The Roumanian petroleum industry continues to be agitated by the question of the allotment of the home trade in kerosene among the refiners. We publish elsewhere the reports of the commission appointed by the refiners—to establish a method of determining the capacity of refineries. Independently of this commission, Mr. Halaceanu, a Government engineer, has carried out an exhaustive inspection of all the refineries, and is now preparing a detailed report to the Minister of Finance. The discussions which have taken place among the refiners on the subject of the new law have brought clearly to light the many difficulties which lie in the way of its application. This law empowers the Government to fix the price of refined oil at the refineries by adding to the average market price of crude oil a sum of 40 to 45 francs per ton for the refining. The great difficulty here is to arrive at a fair figure as the average price of crude

oil. It is well known that about 70 per cent. of the crude oil production belongs to firms owning refineries, and this oil never comes on the market in its crude state, and there is therefore no market price for it; a further 16 to 18 per cent. is represented by the production of the Regatul Roman Co., which is delivered to the Romano-American and the Aurora Co. under an old contract much below present market prices; a further 7 per cent. of the production is also sold under contract to the refiners, so that there is only 5 to 7 per cent. of the production which comes on the open market and to which market prices apply. It is obviously unfair that, because the quantity of crude oil coming on the market is small, and, therefore, the market price on it may at any time go up very high, the owners of the remaining 93 to 95 per cent. which is really obtained at a much smaller cost, shall benefit by the artificial market price and be allowed to charge a correspondingly high price not only for the 40,000 tons of illuminating oil, but also the 350,000 tons of liquid fuel which are consumed annually in Roumania.

The American fields passed through a most eventful period during May, for not only was activity in all fields greater than has been the case for many months, but the new production was larger than that of any month during the present year. Comparing the month with that of April, the increase in new wells brought into production was two hundred, and the new production itself was 8,000 barrels in excess of that of the preceding month. The productive average of the wells completed in the high grade oil producing regions was over eleven barrels per day as against an average daily yield of nine barrels during April. In the Mid-Continental fields activity was also great during the month, but the attitude of the Legislature still shews no great change. From California and Texas come reports shewing a highly satisfactory condition of affairs with regard to production, though a falling market in Texas, is bringing forth loud complaints.

PETROLEUM IN THE ORANGE RIVER COLONY.

The Bloemfontein correspondent of the *Cape Times* announces that arrangements have been completed for the formation of an important organisation in the Orange River Colony, with the object of proving the presence of payable oil. The investigations relating to oil have been proceeding in the Orange River Colony ever since the war, but more particularly within the past six months. A large amount of ground has been covered, and patient and careful investigation has resulted in the definition of a broad oil belt which stretches across the colony, roughly from the north-east to the south-west districts of Harrismith, Bethlehem, Senekal, Ficksburg, Ladybrand, Shaba 'Nchu, Blomfontein, Wepener, Smithfield, Edenburg and Fauresmith. In Ladybrand district also five distinct basins have been located. The discoveries there embrace oil springs, oil shales, ozokerite (mineral wax), blue clay, coarse sandstone impregnated with oil, bituminous tufa, etc. The basins in each case are clearly defined.

LONDON OIL SHARE MARKET.

FRIDAY, JUNE 19TH, 1908.

The period that has elapsed since our last issue has proved a very apathetic one in the Oil Share section of the London Stock Exchange, and there is little or no movement to report, although the tendency is decidedly stronger, and there is little doubt but that bed-rock prices have been touched, and now that prospects appear to be brightening, advances cannot be long delayed.

On the day following our last report Spies Petroleum hardened to $\frac{15}{8}$ - $\frac{17}{8}$, while Californian Five per cent. First Mortgage Debentures rose a point at 100-103. On Thursday Shell Transport Ordinary moved up 1s. to 45s. to 46s., and the next day a continuance of buying improved the price another 1s. at 46s. to 47s. On Saturday there were no alterations to record, but on Monday Assam Oil were quoted slightly better, although the price was a wide one, at $\frac{1}{2}$ - $\frac{5}{8}$. On Wednesday, Shell Transports lost 1s. of their previous gain, closing 45s.-46s., but the Preference were a closer and, consequently, better price at $9\frac{7}{8}$ - $10\frac{1}{8}$.

At the Mid-June Settlement, which commenced on the 10th inst, the Account to be adjusted was very small, rates of Contango being low as money is very plentiful.

A comparison of making-up prices with those fixed at end-May shews some little irregularity. Californian Oilfields at $51\frac{5}{8}$ shew a rise of $\frac{7}{16}$, and Shell Transport Ordinary and Spies Petroleum are both 6d. better at 44s. 6d. and 9s. 6d. respectively. On the other hand, Anglo-Russian Petroleum have fallen $1\frac{1}{2}$ d. per share at 6d. while Baku Preference and Russian Ordinary have both lost 6d. at 2s. in each instance.

No change is recorded in Buku Ordinary at $\frac{1}{16}$, Russian Preference at 3s., Schibaieff Ordinary at 2s., or Schibaieff Preference at $\frac{7}{8}$.

THE TIN PLATE MARKET.

Messrs. Norton, Owen & Co., of 4, Bishopsgate Street Within, London, E.C., report under date June 18th, 1908, as follows:—

There is a fair general enquiry, and oil plates for prompt delivery are in good demand and command a premium; in fact, there are indications of a scarcity for July which will be accentuated should another spell of hot weather set in.

The exports are remarkably well maintained, as will be seen from the statistics from official returns which we give at foot, and shew an increase of 828 tons for May as compared with the same month of last year, although for the five months there is a slight falling off of 558 tons. These figures clearly demonstrate the wonderful vitality of the tin plate trade, which in the prevailing depression in the iron and steel trades appears to be the only bright spot.

Makers' quotations vary considerably according to the state of their order books, but approximately prices to-day are as below:—

1C	18 $\frac{3}{4}$ × 14	124 sheets	110 lbs.	12/4 $\frac{1}{2}$ to 12/7 $\frac{1}{2}$	per box.
1C	19 $\frac{1}{2}$ × 14	120 "	110 "	12/4 $\frac{1}{2}$ "	12/7 $\frac{1}{2}$ "
1C	20 × 10	225 "	156 "	17/6 "	17/9 "

F.o.b. Wales. Tin lining and iron hooping extra.

EXPORTS OF TIN PLATES.

	May, 1907.	May, 1908.	Jan.-May, 1907.	Jan.-May, 1908.
	Tons.	Tons.	Tons.	Tons.
Russia	106	81	3,404	4,020
Germany	3,664	3,612	17,679	13,673
Holland	2,679	2,133	12,128	10,576
Belgium	684	885	3,308	4,075
France	3,174	2,594	11,650	12,357
Portugal	982	591	4,085	4,326
United States ..	6,222	7,692	28,432	29,722
British East Indies	4,912	3,748	24,552	20,031
Australia	801	1,578	5,890	8,835
Canada	1,613	1,538	8,085	5,646
Other countries ..	10,442	11,655	53,274	58,668
Total	35,279	36,107	172,487	171,929

.. AN INTERESTING HIVE OF INDUSTRY..

A Visit to the Works of Messrs. John M. Thom, of Patricroft.

(By OUR ROVING COMMISSIONER.)

It is somewhat of a strange coincidence that when the petroleum industry in all parts of the world began to assume a degree of considerable importance in international commerce—and we are going back to the early eighties—there became established in Patricroft,

so when Mr. John Thom was in his teens, he was to be found in charge of gangs of drillers boring deep for the hidden treasures of the earth.

But this was long ago, yet that early history of the founding of the present firm at Patricroft is a subject of



THE HEAVY TURNING AND ERECTING SHOP.

Lancashire, almost in the centre of Cottonopolis, a firm which has in the intervening years been honourably and closely associated with the petroleum industry by reason of its manufacturing drilling tools and casing for use in petroleum wells—we refer to the firm of Messrs. John M. Thom.

We are told that “great events from trivial causes spring,” and the same applies to both men and concerns. Twenty years ago the great works at Patricroft, which have for years given regular employment to nearly two hundred workmen, were matters connected with the future, for their founder—Mr. John M. Thom—commenced business in quite a humble way. He was bred and born, if we may say so, in the boring industry. His father was one of those Scotsmen who was directly associated with borings, no matter of their nature, and

which one could never tire, when the events are detailed by the one whose perseverance and dogged persistency has brought the concern of which we write to-day to the top rung of the ladder in that section of commerce which dives down into the bosom of mother earth for the where-withal of its existence. There possibly would not have been such a firm in our commercial directory to-day as that of Messrs. John M. Thom had it not been that the father once, in Scotland, refused to accept work, the financial result of which rested to a great extent upon the success achieved in the borings to be carried out. This was the chance for Mr. Thom the younger, and a glorious opportunity it turned out. He had confidence in himself and in the men under him, and in the end, success was his.

But that early profitable contract carried with it many

troubles, of which, we regret, we must not speak. Nevertheless, they were troubles which in turn brought



—SOME INTERESTING—

other successes, and in the long run, Patricroft—and even Lancashire—welcomed the coming into its midst of the now old-established firm of Messrs. John M. Thom. For a long time Mr. Thom directed his attention to the putting down of artesian wells, and there is no exaggeration here in stating that under his supervision miles upon miles of borings have been sunk in this country. From the earliest period in his commercial



PORTION OF THE YARD.

history, Mr. Thom has recognised how absolutely necessary it is to have tools when boring, which shall

be of the finest material procurable, and it was this knowledge which led him, years ago, to determine



—INTERIOR VIEWS.

that at any cost such tools should be available for all work which he took in hand. After doing much well-sinking for water, Mr. Thom's attention was then centred in borings for coal in the majority of the English coal fields, and here his indomitable perseverance was rewarded by his securing that hall-mark of success—Government patronage, for to-day Mr. Thom is one of the most well-known and successful Govern-



THE FITTING SHOP.

ment boring contractors. It is, however, in regard to his connection with the petroleum industry that we

would especially speak. Few there are to whom the firm's name is not familiar in regard to either

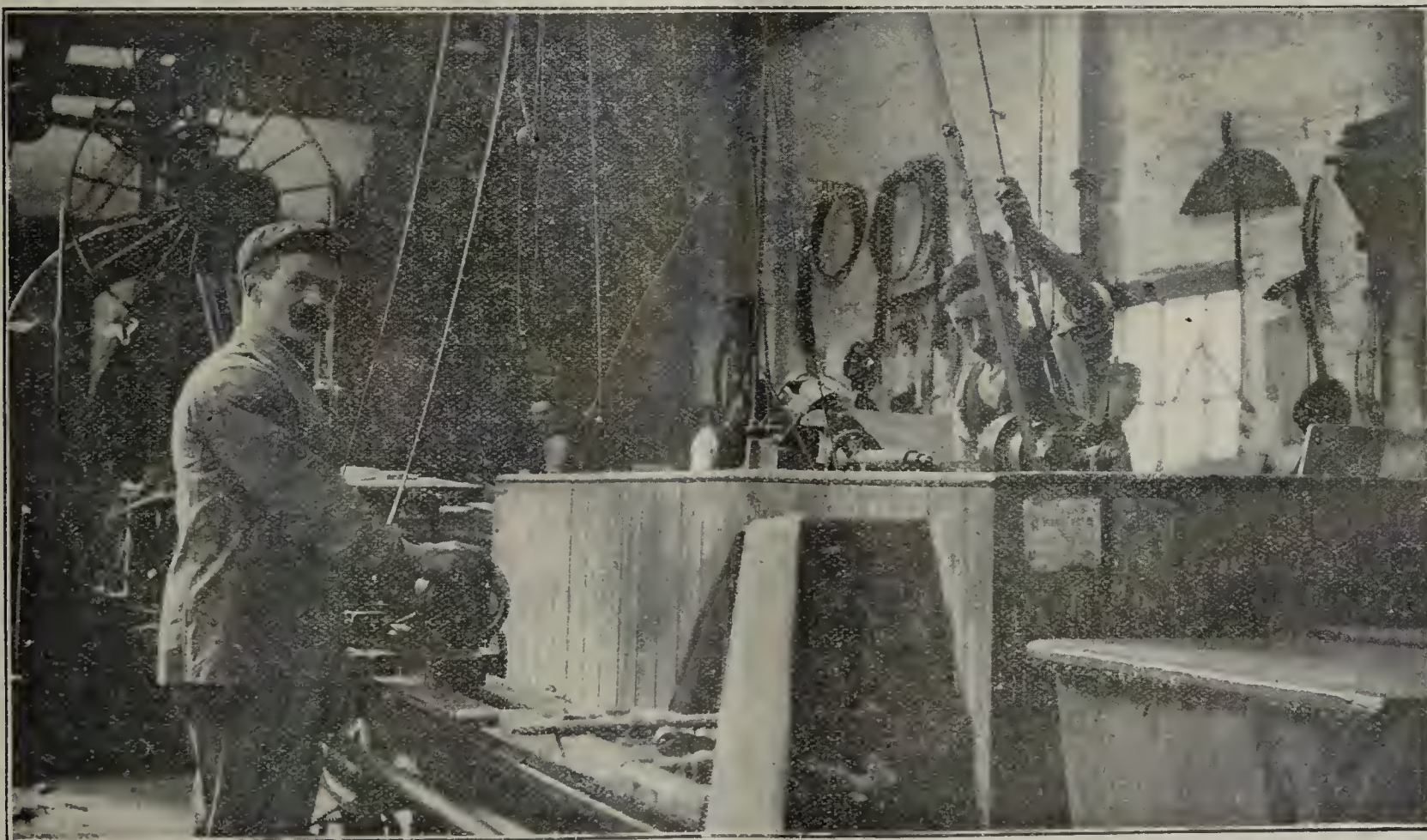
but not only this. Mr. Thom has for years made a special study of the difficulties encountered when



THE BOILER AND TUBE SHOP.

the supplying of boring tools, well casing, or pumps of every description, for the firm's long list of patrons includes some of the most successful operating firms in Baku, Roumania, Galicia and America. Whether it be in regard to rigs, boring plants, pumps, air compressors of power for manipulating the boring tools or the baler, Mr. Thom is ever in readiness with a

drilling for oil, and has some not altogether pleasant experiences in regard to those expensive fishing jobs which have broken the backs of more oil companies than one. But difficulties were made to be overcome, and so to-day Mr. Thom has special drillers at hand ready to be sent to any locality, and for any purpose in which boring is the chief work, and all equipped



A CORNER OF THE MODELLING DEPARTMENT.

very large stock of machinery ready for dispatch to the most remote producing districts of either hemisphere;

with that most valuable asset, of good tools and wide experience.

Having said so much of the firm of Messrs. John M. Thom, let us now proceed to briefly refer to the most interesting visit which our representative had the pleasure of paying to the extensive works at Patricroft the other day. The one half cannot, of course, be told, for a pen fails to adequately describe all that was in those several hours seen by a *detour* of the various departments. The works themselves have an imposing frontage to the Bridgewater Canal at Patricroft—hence their title—Canal Works. Entering the main offices we are conducted to Mr. Thom's sanctum on the ground floor, and here we meet the genial founder of the firm—Mr. Thom—who has just returned from inspecting the boreholes at present being put down by his firm for coal in Kent. "Yes," he says, in reply to questions from the REVIEW man, "we are just now exceptionally busy with borings of all descriptions, and our works are running at full pressure in order to meet all requirements with as little delay as possible."

"Your visit comes at a very appropriate time," he continues, "for we have at the present time a large order for the oil fields running through our works, and now almost ready for shipment."

Our eyes wander round the office, and immediately rest upon quite a large number of "bits" from the diamond drills of the firm, and for which it has secured an enviable name in many parts of the world. These crowns, Mr. Thom explains, have come home for repair, for although the large black diamonds with which they are studded know not what wear is, their setting becomes defective in time and they are rendered useless for further good work until they are fixed into another new steel crown. The diamonds are of tremendous size, and that little heap of drilling crowns in the corner of the room must represent a sum assuredly running into four figures.

Passing through swing doors we emerge into the main shops of Messrs. Thom's works. Here the scene is certainly one of remarkable activity, some idea of which will be gathered from the photographs of the various departments here reproduced, and which were taken during our tour of the works. In one part of the building are huge stacks of well casing, awaiting their turn to be passed through the strange-looking machine which will impart to them the necessary threads, while in another quite a miniature army of workmen are busy upon the erection of a portable engine, of which the firm makes a speciality, and which is used for driving the diamond boring plants. Mr. Martin, the firm's manager, informs us that similar engines to the one now being erected are doing duty in various parts of the world. As we pass down the long rows of lathes, punching machines, etc., the tumult and deafening roar increases, until it is a relief to find one's self in the open air inspecting the power house. The whole of the power required is derived from a large suction gas plant running with two sixty horse-power engines, and is conveyed by belting to various parts of the works. We now re-enter the works, and pause at the smiths' department, where four smiths' fires tell their own tale of bustle and business activity. These smiths' fires have been added

one by one to cope with the requirements of the firm; for two decades ago one fire alone sufficed to supply all demands. Thus, the march of progress of the firm, as is evidenced by this department, has been truly great.

Near the smiths' shops is situated the modelling shops, where tracings and models are made and kept of all important orders passing through the works. Everything turned out at the works is worked upon a never-erring accuracy of scale, for, as Mr. Thom says, it is only by careful attention to the comparatively small details that ultimate success in the finished article is achieved.

One after another, we visit and closely inspect the several remaining departments of the firm's works, and at each one are inclined to marvel at the fact that in this country, geographically so far distant from many of the important oil fields, such an extensive works can be kept regularly and fully employed attending to the needs and requirements of drillers in the centres of production. Yet after all this is not surprising, since ninety per cent. of the outlay necessary for exploitation in the petroleum fields must of necessity go for the acquisition of machinery and drilling utensils.

One thing, however, which impressed us throughout our visit to these works, is that, thanks to the care which now is exercised both in the choice of the material for drilling apparatus, and in the making of the tools themselves, failure in oil exploitation becomes less probable each passing year, thanks to the persistent perseverance of such firms as that of Messrs. John M. Thom.

OIL TANKER TRANSFERS IN LONDON.

According to the latest issue of the *Mariner*, the steel screw tank steamer, "Romany," 3,952 tons gross, built at Newcastle in 1902 by Messrs. Armstrong, Whitworth and Co., Ltd., specially for the carriage of petroleum in bulk, engines 25, 42 and 68 by 45-inch stroke, dimensions 350 feet by 47 feet by 27 feet 6 inches, and owned by the Asiatic Petroleum Co., Ltd., London, who purchased her from the Deutsch Russische Naphtha Import Co., Berlin, in 1906, has now been sold to the Anglo-Saxon Petroleum Co., Ltd., London.

The steel oil tank steamers, "Aral" and "Astrakhan," owned by the Rover Shipping Co., Ltd. (Messrs. Hamilton, Fraser and Co., managers), Liverpool, have, says the same authority, been sold to London owners. The "Aral" is 2,826 tons gross, built at Newcastle in 1891 by Messrs. Armstrong, Mitchell and Co., Ltd., engines 22, 35 and 58 by 42-inch stroke, carries about 3,750 tons d.w. on 23½ feet draught, dimensions 310 feet by 40 feet 2 inches by 28 feet 2 inches; and the "Astrakhan" is 3,438 tons gross, built at Jarrow in 1892 by Messrs. Palmer's Co., Ltd.; engines 24, 40 and 64 by 42-inch stroke, carries about 4,550 tons d.w. on 23 feet 8 inches draught, dimensions 330 feet by 42 feet 9 inches by 28 feet 7 inches. Both steamers are specially built and designed for the carriage of petroleum in bulk.

The Spies Petroleum Company, Limited.

A SUCCESSFUL YEAR'S WORKING.

The ninth annual meeting of the shareholders of the Spies Petroleum Co., Ltd., was held on Thursday, at noon, in the Council Hall of the London Chamber of Commerce, Mr. J. Annan Bryce, M.P., the company's Chairman, presiding.

The Secretary of the company—Mr. H. G. Trew, F.C.I.S.—read the notice of the meeting and the report of the auditors, after which the annual report was taken as read.

This report stated that the net production of crude oil for the year, after deducting leakage and water, amounted to 6,779,748 poods.

The stock on hand at the 1/14th January, 1907, was	Poods.	Poods.
Which, with the net production during the year of		114,086
And crude oil purchased		6,779,748
		3,871
Made a total of		6,897,705
Of which there were:—		
Sold and delivered	5,151,651	
Used for fuel	1,562,360	
Paid as Nature Royalty	22,412	
		6,736,423

Leaving in stock on 31st December, 1907/13th January, 1908 161,282

The above figure of net production shews an increase over that of the preceding year of 722,671 poods, or nearly 12 per cent

The crude oil sold and delivered realised 1,118,005.08 roubles, an average selling price of 21.68 copecs per pood, an improvement over the price of the preceding year of .60 copec per pood.

The cost of deepening of all wells during the year has been charged to revenue.

The maintenance of buildings, machinery and plant has been charged to revenue.

The net profit for the twelve months ending 31st December, 1907/13th January, 1908, was ..	£	s.	d.
To which must be added the net balance brought forward from last year	32,184	2	0
	15,768	0	2

Making a total balance to the credit of Profit and Loss Account as at the 1st/14th January, 1908, of 47,952 2 2

Of this sum your directors have placed to:—
General depreciation of leases, buildings, plant and machinery the sum of 18,800 0 0

Leaving an available balance of 29,152 2 2
Out of which the directors recommend the payment of a dividend of 7½ per cent., absorbing. 26,625 0 0

And leaving to be carried forward the sum of £2,527 2 2
Out of which Russian taxes have to be provided.

The report continued to state that the directors had pleasure in being able to record that during the year under review work proceeded at Grosny with greater freedom from interruptions from strikes and labour troubles than was the case in the preceding year, and during the latter part of the year the conditions of labour became quite normal.

The work of development on some of the plots acquired during 1906 was actively pushed on, and whilst satisfactory results were obtained from the Baskakoff plot during last year, in February of the present year a rich stratum of oil was encountered at a depth of 1,651 feet, to 1,700 feet in well No. 5 on this plot, which produced

by spouting continuously from the 14th February, 1908 (n.s.), to the 10th May, 1908 (n.s.), 2,331,100 poods. The expectation of a good supply of oil from that plot had thus been so far realised.

The above well, which stopped on the 10th May (n.s.), after a little deepening, again became active on the 30th May (n.s.), and since the resumption of spouting had produced 109,410 poods of oil. It continues to produce at the rate of about 13,500 poods a day.

The total production from all the company's properties from the 14th January, 1908 (n.s.) to the 7th June, 1908 (n.s.), amounted to 5,251,300 poods, as compared with a total of 2,581,780 poods for the corresponding period of last year, being an increase for the period of 2,669,520 poods.

The present contract with the Vladikavkas Railway Co. had been renewed for a further term of three years from 1/14th January, 1909.

In view of the increased production from the company's properties during the past four months, the board had concluded a contract with responsible firms at Grosny for the sale of the surplus production for the next twelve months.

The price of crude oil at Baku was maintained during the year at a good level. During the past two months some falling off was shewn, but prices had again improved slightly, and now ranged about 22½ copecs per pood for crude oil.

As would be seen from the balance sheet, the issued capital of the company amounted to £355,000, and the capital expenditure, after deducting depreciation to date, to £384,631 8s. 6d., being an excess of expenditure of £29,631 8s. 6d.

It is proposed to adjust that excess by the issue of the balance of the authorised capital, namely, 65,000 shares of 10s. each, and the shareholders would shortly be offered the opportunity of applying for those shares at par.

The Chairman, in moving its adoption, said one point in the accounts was the heavy expenditure incurred on work during the year, owing principally to the activity upon new plots. During the past 12 months no less than 18,393 feet had been bored as compared with 11,538 feet during 1906, an increase of nearly 60 per cent. They had already begun to reap a handsome return upon that expenditure in the largely increased production since the beginning of the present year. The second point to which he desired to draw the attention of the shareholders was that, though the general expenditure was so much greater, the cost of production was only slightly higher, being 13.02 copecs per pood against 12.79 copecs during 1906, and that notwithstanding the fact that on some of the new plots, the royalty was higher. That the increase in the cost of production was not greater, was due to the considerable increase in the production itself, amounting to 772,000 poods. During the present year the very large increase which had taken place in production, the cost would certainly shew a very large diminution, and would, he hoped, be lower than it had been since the company started.

In pursuance of their policy of purchasing new plots in order to be in a position to maintain and even increase their production, the directors had acquired additional holdings, bringing the company's total area up to about

140 dessatines, and the wisdom of that policy had been seen since the beginning of the year, as the increased yield had been derived from one of the lately purchased plots. The spouter upon that plot had up to date given 4,000,000 poods of oil, and its production during the past few days was 14,000 poods daily, the profit from that production having already paid for the cost of the purchase and the development of the plot. Such a spouter as theirs furnished a most delectable form of production, for it cost nothing to pump or bale, while it did not cause any damage or present difficulties of storage as very large fountains did.

Upon one of the other new plots, one of the wells on trial baling shewed the very satisfactory production of 2,700 poods per day, while in other wells Mr. Maresch believed they were approaching a stratum which was expected to give a large output.

The directors had every reason to be satisfied with the acquisition of their new territories, for from them they expected a high rate of production. The gross production for the five months this year amounted to 5,479,970 poods, as against a gross production of 7,007,160 poods for the whole of 1907. He was pleased to say that the strenuous efforts put forward to effect economies were being continued, and quite recently the utilisation of the natural gas promised a large economy upon some at least of their plots. As he had previously mentioned, they had been trying a new system of drilling, and though at first great difficulties were encountered, the results obtained recently had been much better, and they had great hopes that the system would mean increased speed in boring, and diminished cost.

The Chairman then proceeded to speak upon the subject of further capital, mentioning that that embodied two questions—the issue of the balance of capital already created, and the creation of new capital. Their present proposal, however, was to issue the balance of authorised capital, namely, 65,000 shares of 10s. each. At the moment they knew of nothing in the immediate future to call for the issue, although they could not foresee when such an occasion might arise.

The speaker then moved the adoption of the report and balance-sheet, paying an appreciation to the company's London manager—Mr. Hirsch—who had resigned during the year.

Mr. G. Grinnell-Milne seconded the adoption of the report.

Mr. Herbert E. Crabbe heartily congratulated the board and the shareholders generally upon the very satisfactory balance-sheet, and the excellent results which had occurred since the accounts were made up. The Spies Petroleum Co. to-day stood on the London market in a considerably more satisfactory position than any other Anglo-Russian oil company. The success of their company stood out in a very marked degree when compared with the Schibaieff, the Baku Russian, and the Russian Petroleum and Liquid Fuel Companies. He hoped their own directors would realise why those other companies had gone so swiftly down the road to ruin. The various enquiries which had taken place had proved that the boards of those companies entered into contracts with individual directors or directors' firms both with regard to the sale of oil and the purchase of machinery, etc. He trusted their directors would assure them that their company's oil was sold independently in the market, and that no director or his firm were connected with the sale of it. He trusted, too, that in the purchase of new plots their company would steer clear of the difficulties which had been encountered by other oil companies in buying

land from directors after it had been drilled with the money of the shareholders. Another point he suggested was that there might be an interim dividend.

Mr. G. Grinnell-Milne said that as a director of the Schibaieff Co., and having on that board gentlemen whose names were well and honourably known, he scarcely expected anyone to suggest that they had been guilty of actions such as the previous speaker had suggested. He took that opportunity to deny *in toto* everything that the previous speaker had said as applying to the Schibaieff Co. It had not been, he admitted, a success, of late years from the point of view of the shareholders, but he could assure all that the board of directors had always maintained an honest and business-like treatment of all matters appertaining to the company's business, under very difficult circumstances, local and other, which were beyond their control.

Mr. Crabbe apologised for having coupled the name of the Schibaieff Co. with the others, but said he had in his mind the disclosures made in connection with the Russian Petroleum and the Baku companies, and in no way desired to cast any slur on the Schibaieff Co.

The Chairman, in replying to the question, said he desired to take that opportunity of saying that as a large shareholder in the Schibaieff Co., he was convinced that the management had always been honest and above board. Mr. Crabbe had asked whether their oil was being sold on the open market. It was always sold on the market, and from the very commencement no director had had anything to do with, or been in any way interested in, the sale.

As to paying an interim dividend, he trusted their company would not. It had to look to the future, and far better was it to keep their company in a sound position, rather than establish a precedent of interim dividends which they might not be able to keep up in years to come.

The report was then unanimously adopted, after which the Chairman moved the payment of the dividend, this being likewise agreed to.

It was then agreed to increase the capital of the company to £500,000, after which a vote of thanks to the Chairman for presiding, closed the meeting.

PRODUCTION OF ENGLISH COMPANIES IN RUSSIA.

BAKU RUSSIAN PETROLEUM Co., LTD.—Upon inquiry at this Company's Offices on Friday, we were informed that there were "no figures for publication."

RUSSIAN PETROLEUM AND LIQUID FUEL Co., LTD.—The production for the week ended June 6th was 241,000 poods, or 3,885 tons; and for the week ended June 13th was 254,000 poods, or 4,095 tons.

SPIES PETROLEUM Co., LTD.—The production for the week ended June 7th was 222,400 poods, or 3,587 tons, of which the fountain in No. 5 well, on plot Baskakoff gave 83,700 poods, or 1,350 tons. The output for the week ended June 14th was 228,670 poods, or 3,688 tons, of which the Baskakoff fountain gave 95,190 poods, or 1,535 tons. The fountain gave on the 15th inst. 13,560 poods, or 218 tons, and still continues to spout.

THE EUROPEAN PETROLEUM Co., LTD.—The production for the week ended June 7th was 148,952 poods, or 2,401 tons; and for the week ended June 14th was 142,654 poods, or 2,300 tons.

THE ASSAM OIL COMPANY, LIMITED.

ANNUAL MEETING OF SHAREHOLDERS.

The tenth annual general meeting of the shareholders of the Assam Oil Co., Ltd., was held on Wednesday, at Winchester House, Old Broad Street, London, E.C., Lord Ribblesdale, the chairman of the company, presiding.

The Secretary (Mr. Evan A. Jack), read the notice convening the meeting and the auditors' report, after which the report of the directors was taken as read.

This report shewed that the refinery had been maintained in a thoroughly efficient state during the year, and proved itself capable of dealing with large quantities of oil. The products had been refined both satisfactorily and economically.

The general position at the drillery continued to be satisfactory, but, owing to mechanical and engineering troubles, the progressive increase in the quantity of the crude output had not been maintained. Some wells which last year reached the oil, and were counted on to largely increase the crude supplies, had unfortunately been closed owing to difficulties with the casing. Energetic measures were being taken to remedy that, but meantime the company was experiencing a slight set-back in its production.

Mr. George Turner, accompanied by the secretary, visited the company's properties during the year, and they were much pleased with all they saw and were particularly impressed by the marked improvement in the labour conditions and health at Digboi.

The accounts shewed a profit of £26,325 19s. The financial position of the company shewed a very great improvement on last year, but, though righting itself out of profits, it was not yet all it should be. The directors, therefore, did not recommend the payment of a dividend, but proposed placing £20,000 out of the above profit to depreciation account, leaving a balance of £6,325 19s. to be added to the carry forward. It should be understood that the depreciation account was almost entirely applicable to the drillery, the refinery being maintained and repaired out of revenue.

The Chairman, in moving the adoption of the above report and accounts, said they had reduced their debts during 1907 by £12,850. This, he thought they would agree, was a substantial result to have achieved in the year under review. It had been done, of course, with the profits remitted home from India. Then again, he would ask them to add to this £12,850 the sum of £16,608, which they would see they spent on capital account, and this total approximately represented the profit for the year, and shewed how the money had been disposed of. Having therefore a total profit of £27,000, they had used £16,000 on capital account, and reduced their debts by £12,000. He might add that India paid its way and sent them home this year in cash £19,000. As to depreciation, they had written off £20,000 to that account, making a total of £55,000, and that figure the board considered to be adequate; but he should like to say that that £20,000 must not be construed in any sense

as a fixed depreciation charge against their profits. They had written it off because, in the circumstances, they thought it was a right thing to do, but in writing off depreciation they would always be guided by what they thought the circumstances justified. They would be glad to see that their insurance account had now reached the satisfactory figure of £2,843, and that amount would, of course, be further increased during the present year. As the report stated, owing to mechanical difficulties, the production of crude for 1908 was slightly less than for 1907, and less than they had every justification for expecting had the unfortunate occurrence mentioned therein not taken place. The accounts, however, should not shew any material difference, and the general outlook was as good as it ever was. If the three wells which had got into trouble were in difficulties because there was no oil, or because they had failed to reach the oil, he should say it was a serious matter to contemplate; but all these wells had reached the oil and were producers in large quantities, and proved that in this particular part of the field on which they were situated they had developed a prolific and a valuable area. Like the good man struggling with adversity, these wells had got into difficulty, not altogether of their own making. It was a misfortune, but only a temporary misfortune, and, that being so, he repeated that it would have no bearing, beyond a temporary one, on the ultimate prospects of the company. They were now pushing the drilling of new wells energetically to replace these, and they confidently expected to soon bring their crude supplies up to the figure which they had hoped they would and must have reached this year. The development of an oil field was always attended by major or minor untoward occurrences; but in the opinion of the board they had a fine property, which gave excellent promise for the future.

Mr. Turner seconded the adoption of the report, which was agreed to.

At the request of Lord Ribblesdale, Sir Boverton Redwood then addressed the meeting. He said he was of opinion that they were in a better position by far than they were this time last year in respect of the promise of future supplies of oil, because, although it was true that wells which the directors reasonably anticipated would have been producing large quantities of oil at the present time were not already in that position. Still those wells had furnished them with incontrovertible evidence of the existence of undiminished stores of petroleum in the localities in which they had been drilled, and that, after all, was the important point. It was, in point of fact, simply due to what was properly described in the report as mechanical and engineering troubles that these wells had not been producing. They might hopefully look for better things in the future, in view of the circumstance, that the cause of this collapse of the casing had been most carefully studied, and that every effort would be made to guard against such occurrences in time to come.

Mr. Turner then briefly referred to his recent visit to the property, after which a vote of thanks to the Chairman closed the meeting.

THE OIL FIELD OF SOUTH- WESTERN WYOMING.

ANOTHER
IMPORTANT
GEOLOGICAL REPORT.

The United States Geological Survey is about to publish a comprehensive report of much importance upon the oil field in South-western Wyoming, prepared by Mr. A. C. Veatch, one of the Survey's most accomplished experts. The area discussed in this report not only embraces the extreme south-western corner of Wyoming, but a small portion of Utah, its northern and eastern boundaries lying respectively about 70 miles north of the southern boundary and about 35 miles east of the western boundary of Wyoming.

This region has commanded a wide interest for many years. As early as 1847 an account was published of an "oil spring" near the present town of Hilliard, and was described as having been discovered by the Mormons. The oil was skimmed off the surface of the water in a shallow well dug at this point and sold to emigrants and in small quantities carried to Salt Lake City.

In 1867 Mr. C. W. White began operations at a spring in N.W. $\frac{1}{4}$ sec. 33, T. 14 N., R. 119 W., now known as White oil spring. He dug a large hole and skimmed off the oil, which he sent to Salt Lake and sold to tanners. He began drilling in 1867, but abandoned the hole in 1868 at a depth of 480 feet. Later the Evanston Oil Co. sunk a well at this place, but it was likewise abandoned at a depth of a few hundred feet.

The Carter oil spring locality became important in 1868 when, in driving a tunnel for coal, a slight flow of petroleum (eight to ten gallons a day) was obtained, and the discharge of the spring ceased. This oil was collected and sold to the Union Pacific Railroad and to neighbouring coal mines for lubricating purposes. In 1886 a local company was formed, and drilled three wells 225 to 300 feet deep. Two of them are reported to have yielded six barrels a day. This spring was incidentally mentioned by Meek in 1871, and a short statement regarding it was published by Emmons in 1877, but the first account of importance is that published by Ricketts in 1888.

The oil springs along the South Fork of Twin Creek, in T. 21 N., R. 117 W., are perhaps referred to in Lander's general statement, that in the mountains along the divide, in latitude 42 degrees N., there are "beds of coal, iron, and salt and a spring of peculiar mineral oil, which by chemical process may be made suitable for lubricating machinery." At any rate, the map of his explorations in 1857 shews that he passed up Twin Creek and over Hodges Pass. Operations were begun here by the Twin Creek Land and Oil Co. in 1885. They drilled two wells between this time and 1887, one 110 feet deep, and the other 185. Both yielded a large flow of brackish sulphur water, with a little oil and gas. The deeper of the two is now open, and is commonly known as the Clark well, from Senator C. D. Clark, who was interested in this company. The oil is dark and heavy. The gravity is given by the Union Pacific Railroad Co. as 26.75° B., by Slosson as 19.7° B.

In August, 1900, the Union Pacific Railroad Co.

began a water well at Spring Valley, Wyo., and on October 14th, 1900, at depths between 491 and 493 feet, struck a sand containing oil of very high grade. Oil of a similar high grade was struck again in December between 573 and 581 feet and the following May between 1,148 feet and 1,170 feet.

Intense excitement followed this find, which appears to have lost nothing in magnitude as the news spread. The whole country was soon staked out with petroleum claims under the placer mining laws. The greater part of these claims were purely speculative, the claimants generally having neither the intention nor ability to develop them. The lands staked were of two types—unoccupied Government land and unpatented odd sections within the limit of the grant made to aid in the construction of the Union Pacific Railroad. This grant, embodied in the acts of July 1st, 1862 (12 Stat. L., 489) and July 2nd, 1864 (13 Stat. L., 356), gave the Union Pacific all the odd-numbered sections of the public lands within certain prescribed limits; but mineral lands other than coal and iron were expressly excepted from its operations.

The section on which the Spring Valley well was drilled happened to be an unpatented odd section, and it was therefore located by several claimants, who assumed that the oil discovered in the Union Pacific well satisfied the law in respect to the discovery required for each locator. The Union Pacific Coal Co. had opened a large coal mine on this section, and opposed this view of the matter, placing guards about the section to prevent others from prospecting on the land. In April, 1902, the General Land Office sent a special agent, Mr. Charles T. Forbes, to make an examination of these unpatented odd sections, including section 27, with a view of determining their character, whether valuable for minerals other than coal or iron. In this inquiry Special Agent Forbes conducted oil operators to section 27 against the protest of the Union Pacific Co. and installed machinery there for the purpose of drilling. In this he was held to have exceeded his instructions, and was supplanted by Special Inspector J. W. Zevely, who, during the summer of 1902, conducted an exhaustive inquiry. This enquiry clearly shewed that section 27 was more valuable for coal than oil, and was so declared by the department in December, 1902. With regard to the other contested sections and the region in general, the Land Office took the very important step of removing from entry or patent, except under the mining laws, all Government land in Tps. 13-14 N., Rs. 117-121 W., Tps. 15-21 N., Rs. 115-120 W., and refused to issue to the Union Pacific Railroad patents for the unpatented odd sections within the railroad grant within the limits of this reservation until after December 1st, 1903, when the issuance of patents was to be determined by the "then known character of the land."

(To be continued.)

NOTES FROM ALL QUARTERS.

RUSSIA.

A Petroleum Harbour for Riga.—A special petroleum harbour is to be constructed in the port of Riga, at the Wollershof. It will be connected by a siding with the Boldera branch of the Riga-Orel Railway.

The Petroleum Association's Taxes.—The Council of the Baku Petroleum Association has requested the Government for permission to levy the increased tax of one-half copec per pood of oil produced for a further period of one year.

Astrakhan Shipments.—Up to the 1st of May the shipments from Baku and Astrakhan of various petroleum products amounted to 31,700,000 poods against 5,500,000 poods in the corresponding period of 1907. The enormous difference is due to the shipping strike on the Caspian Sea last year.

The Mantascheff Case Factory at Batoum has not been working since June 1st. The company proposed to reduce the number of men employed from 1,200 to 300, and to introduce a one shift system instead of the four shifts, which was in force hitherto. The men object to this, and decline to work.

Petrovsk Stocks.—During the first four months of 1908 the quantity of residuals delivered from Grosny to Petrovsk amounts to 404,527 poods, the whole of which quantity remained in stock at the end of April. The local consumption during the four months amounted to 40,654 poods, and this represents the stock left over from last year.

A New Baku Company.—A company has been formed under the title of the Second Baku Petroleum Co. to acquire a producing plot at Balakhany, and also petroliferous lands at Saboontchi, Sarai, Bina and Kara-Dai, all in the Baku district. The founder is Lt.-General N. N. Gulkovsky; the nominal capital is 1,500,000 roubles and the registered office is to be in St. Petersburg.

Liquid Fuel Contracts.—The Moscow-Kazan Railway has recently entered into a contract for the purchase of 4,500,000 poods of liquid fuel, to be delivered during the present and next year's navigation seasons, at the price of 30½ copecs per pood. This leaves a net price of 21-22 copecs at Baku. This railway is one of those which, owing to the high prices, has had temporarily to give up the use of liquid fuel.

AMERICA.

A Texas Boom.—It is reported that a good producing well has been brought in a few miles south of El Campo, Texas, and as a consequence quite a boom in land has been created.

Removal of Indian Land Restrictions.—The President has recently signed the bill introduced during the present Congress providing for the removal of restrictions from part of the lands of allottees of the five civilised tribes upon certain tracts on which petroleum has been found.

In the Caddo Field.—The Caddo field of Louisiana is doing great things, the most recent surprise being the Richardson well which has been brought in at sixty barrels per hour. The new well is 2,100 feet deep. Mr. Richardson has been a persistent driller in the Caddo field, and has been successful in bringing in a number of most prolific gas wells.

Remarkable Demand for Californian Oil.—Our well-informed contemporary—the *Oil, Paint and Drug Reporter*—states that the current demand for crude oil in California is unprecedented in the history of the State's petroleum industry. It is predicted that this year's production will reach 40,000,000 barrels, but even this will most likely be a few million barrels short of meeting the demand.

An Important Oil Strike.—The Prairie Oil and Gas Co. has made an important oil discovery five miles south and west of the famous Glenn Pool, in Oklahoma. The well was brought in at a depth of 2,340 feet, and produced a high grade oil. This well was completed about 500 feet below the formation from which the Glenn Pool derives its oil to-day, and the general belief is that many of the wells in the Creek Nation will be extended to the new sand.

The American Petroleum Company.—This company is one of the latest acquisitions to the list of large Californian operating oil companies. A deal has been concluded by which it secures control of about 1,300 acres of petroliferous land in the Coalinga district. The company has contracted with the Associated Oil Co. to deliver to the latter 60,000 barrels per month from its property on the Salt Lake Field at a price of sixty cents per barrel.

ROUMANIA.

Mr. K. Ozinga has struck oil in his well No. 6 at Bordeni-Parsani, at a depth of 226 metres, and obtained a yield of 30 to 40 tons of oil daily. Mr. Ozinga has commenced drilling his well No. 8 in the same locality.

Sulphuric Acid Duty Free.—The Roumanian Government has granted to the petroleum refineries the right of importing sulphuric acid duty free in a quantity equal to that which each refinery takes from the sulphuric acid works at Valea Calugareasca, in Roumania.

A Bustenari Spouter.—Within the last few days a spouter has been struck on the property of Messrs. G. Stroe, Draghici & Co., at Bustenari, which yields 50 tons daily. This spouter is situated upon one of the properties acquired by an English Company shortly to go to public issue.

The Italo-Roumanian Petroleum Company has published its balance sheet for the last financial year, which shews a profit of 723,048 francs, derived chiefly from its holding in the Concordia Co. and Vega Co. This will probably be used for paying a dividend of 5 per cent. on its preference shares, of a nominal value of 12,350,000 francs.

The Concordia Company.—The accounts of the Concordia Co. for the financial year ended March 31st, 1908, shew a gross profit of 4,440,317 francs, which, after allowing for amortisation and sundry charges, leaves a net profit of 1,760,796 francs. It is proposed to distribute a dividend of 7 per cent. on the capital of 25,000,000 francs.

Roumania's New Distributing Company.—The new distributing company for the Roumanian home market, formed by the Steaua Romana and Aurora companies, the two largest refining firms in Roumania, has commenced operations. The offices are on the premises of the Steaua Romana, who will have the management.

More Successes at Campeni-Bacau.—The Italo-Roumanian Co. has reached the oil stratum with its well No. 10 at Campina-Bacau, and the yield is about 10 tons daily. Well No. 11 has also struck oil; the yield has not yet been ascertained, but will probably be about the same as of No. 10. Wells Nos 12 and 13 are now in drilling, and promise also to give good results.

Calinet—A Prolific Field.—Calinet is rapidly coming to the front as a producing field. The Concordia Co. has recently completed a borehole which yields 100 to 120 tons of crude oil per day. The same company have another well at Calinet yielding 70 to 80 tons daily, and are preparing to start 14 new wells there. Mr. S. Mihalik has started drilling his borehole No. 3, and is at present also erecting derrick and plant for a well No. 4.

Campina Developments.—At Campina, the Steaua Romana is drilling with great activity, and expect to strike oil shortly in several boreholes. Messrs. Stefanescu and Co. are now reconstructing the derrick and machines of their borehole, which was recently destroyed by fire. The two boreholes which the Alliance Boring Co. is drilling for the Trajan Co. are pushed forward with great energy, and are expected to strike oil shortly.

Middlemen Agitate.—It has now become clear that the refiners intend to organise the oil trade on the Roumanian home market on a basis of direct sale to the consumers, and eliminate the middlemen. The latter, faced with the prospect of losing the very handsome profits which they have hitherto been making from the oil trade, have raised an agitation. A meeting has been called at Craiova to consider means of averting the fate awaiting them.

The Moreni Field.—As a result of the success obtained by the Romano-American Co. with boreholes Nos. 6, 8 and 14 in the localities of Coastea Tuicaulor and Lazu, in the Moreni field, the Regatul Roman Co. has also directed its attention to these localities and is now drilling four wells there. The total production of the Regatul Roman Co. at Moreni ranges between 450 and 470 tons daily, whilst that of the Romano-American Co. is about 400 tons daily.

LATEST QUOTATIONS OF PETROLEUM SHARES.

ENGLISH COMPANIES.

This list is restricted to companies who have paid dividends or who are producers.

Company.	Capital Paid Up.	Value of Shares.	Latest Prices.
Assam Oil	£205,000	£1	$\frac{9}{16}$ - $\frac{11}{16}$
Baku Russian Petroleum ..	£750,000 Ord.	£1	$\frac{0}{6}$ - $\frac{1}{6}$
Bibi-Eybat Petroleum Co. ..	£650,000 $5\frac{1}{2}$ % Pref.	£1	$\frac{1}{6}$ - $\frac{2}{6}$
Californian Oilfields ..	£385,000 Ord.	£1	$\frac{6}{6}$ - $\frac{7}{6}$
Commonwealth Oil Co. Pref.	18/- paid up (Prem.)		$\frac{5}{8}$ - $\frac{6}{8}$
Def..	£1 fully paid		$\frac{1}{1}$ - $\frac{1}{1}$
European Petroleum ..	£550,000 Pref.	£1	$\frac{1}{1}$ - $\frac{1}{1}$
" ..	£550,000 Ord.	£1	$\frac{1}{0}$ - $\frac{2}{0}$
" ..	£376,000 Deb.	£100	$\frac{0}{6}$ - $\frac{1}{6}$
Russian Pet. & Liquid Fuel ..	£500,000 $6\frac{1}{2}$ % Pref.	£1	$\frac{69}{73}$
Schibaieff Petroleum ..	£600,000 Ord.	£1	$\frac{2}{6}$ - $\frac{3}{6}$
Shell Transport & Trading ..	£575,000 6% Pref.	£5	$\frac{2}{0}$ - $\frac{3}{0}$
Spies Petroleum Company ..	£575,000 Or.l.	£1	$\frac{3}{4}$ - $\frac{1}{1}$
	£2,000,000	£1	$\frac{1}{6}$ - $\frac{2}{6}$
	£1,000,000 Pref.	£1	$\frac{45}{0}$ - $\frac{46}{0}$
	£312,500	£10	$\frac{10}{8}$ - $\frac{10}{8}$
		10s.	$\frac{9}{6}$ - $\frac{10}{6}$

RUSSIAN COMPANIES.

Company.	Nom. Value in Roubles.	Quotations on June 15th.	
		Lowest Roubles.	Highest Roubles.
Baku Naphtha Co.	100	419	422
Balakhany Naphtha Co. ..	250	—	—
Caspian Society	1,000	4,425	4,475
Mazout Co.	250	—	—
Melikoff, A. C.	250	—	—
Mirzoeff Bros.	250	—	—
Naftalan Co.	250	—	—
Naphtha Co. "Kavkas" ..	250	—	—
Naphtha Trading Co., A. I. Manta-			
cheff & Co.	250	146	148
Neft Co.	250	—	—
Nobel Bros.	5,000	11,625	11,700
"	250	—	—
Rops and Co. V.. ..	250	—	—
Russian Naphtha Co. ..	250	—	—
Society Mazout	250	—	—
Ter-Akopoff Co.	250	—	—
Tumaieff & Co., J. G. ..	250	—	—
Volga-Caspian Naphtha and Trading Co	250	—	—
" (Second Issue)	250	—	—

SCOTCH COMPANIES

Supplied by Messrs. MACLEAN AND HENDERSON, STIRLING.

Company.	Capital Paid Up.	Value of Share.	Latest Prices.
Broxburn Oil Co., Ltd., Ord. 17/- pd	£235,000	£1	£2 4s. 3d.
Do. 6% Cum. Pref. ..	£100,000	£10	£12 2s. 6d.
Burmah Oil, Ord.	£1,100,000	£1	£4 9s. od.
Do. Pref.	£250,000	£1	£1 6s. 6d.
Dalmeny Oil Co., Ord. (7 paid) ..	£37,800	£8 10s	£5 10s. od.
Do. 5% Pref.	£18,900	£7	£4 13s. od.
Oakbank Oil Co., Ltd., Ord.	£170,000	£1	£2 1s. od.
(17s. paid)			
Pumpherstons Min. Oil Co., Ltd., Ord.	£110,500	17s.	£13 1s. 3d.
(17s. paid)			
Do. 6% Cum. Pref. ..	£100,000	£10	£12 12s. 6d.
Tarbrax Oil Co., Ltd. Ord. (£1 pd.)	£38,350	£1	£3 0s. od.
Do. 6% Cum. Pref. ..	£35,000	£1	£1 1s. 9d.
Young's Paraffin Co., Ltd., Ord. ..	£452,808	£4	£3 19s. 6d.
Do. "B" Deb.	£150,000	£100	£196 0s. od.

DUTCH COMPANIES.

Company.	Latest Quotations (per cent.)	Florins
Arnhemsche Petroleum Mij. ..	—	1,000
Aurora .. (Deb. 5%) ..	—	—
Campina Poiana Mij. ..	—	—
Dordtsche Petroleum Mij. (Pref.) ..	145	50
" .. (Deb. $4\frac{1}{2}$ %) ..	102	1,000
Gaboës	—	—
Holl. Rumeensche Petroleum Mij. ..	13	1,000
Int. Rum. Pet. Mij. ..	29	500
Java Petroleum Mij. (Ord.) ..	—	1,000
" .. (Pref.) ..	23 $\frac{1}{2}$	—
Koninklyke Nederl. Pet. Mij. Shares ..	296	250-1,000
" .. Share certificates ..	291 $\frac{3}{4}$	1,000
Mœara Enim Petroleum Mij. ..	143 $\frac{1}{8}$	100
" .. 1-1,000 Oblig. 5 ..	—	250-1,000
" Moesi Ilir " Petroleum Mij. ..	—	—
Nederl.-Rumeensche Petroleum Mij. ..	3 $\frac{1}{2}$	—
Nieuwe Ned. Petroleum Mij. And. ..	—	1,000
Oklahoma City	112 $\frac{7}{8}$	—
Oliebronnen in Hannover Mij. ..	—	—
" .. (Deb. 5 %) ..	49 $\frac{3}{4}$	—
Panolan Maatschappij Cert. ..	90	—
Perlak Petrol. Mij. (6% cum. pr. A.) ..	114 $\frac{7}{8}$	1,000
" .. (Common) ..	—	—
Sumatra-Palembang Petroleum Mij ..	97 $\frac{3}{4}$	500
Tarakan Petrol Mij. ..	33	—
Zuid Perlak Petrol. Mij. (Pref.) ..	97 $\frac{3}{4}$	—

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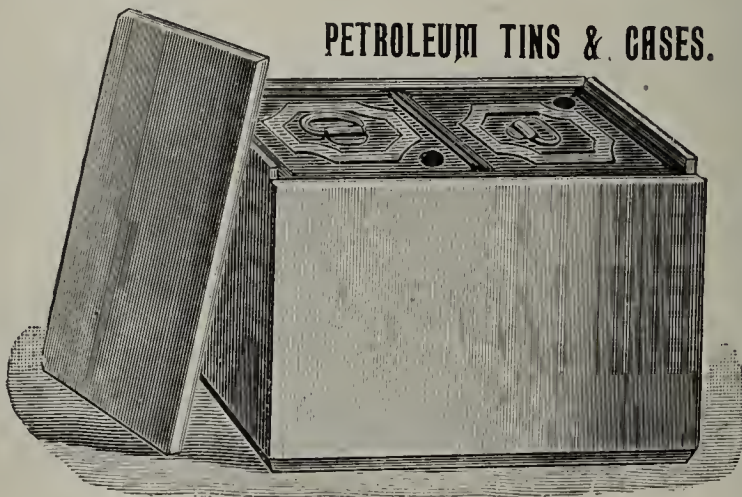
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dividends paid on almost any class of stock or share holding insuring the safety of capital. We
have been established for 38 years, and our position in the banking world to-day testifies to
the success of our business methods, and to the satisfaction of our customers. Write or call
for Prospectus.

A. WILLIAMS and H. J. TALL, Joint Managers

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THE PETROLEUM REVIEW,

45, St. Mary Axe, LONDON, E.C.

American Office: 150, Nassau Street, New York.

SATURDAY, JUNE 20, 1908.

GROANING UNDER TAXATION.

There never was a time in its history when the petroleum industry groaned under the weight of unreasonable taxation more than is the case to-day. From the time that territory is proved to be petro-
liferous, down to the moment the consumer purchases his supplies of oil, there is upon oil a long list of taxation charges, which, were they imposed upon any other industry, would have long ago called for such collective indignation on the part of those directly

interested, as to have had a most decisive effect in the right direction.

We have frequently referred to the deplorable manner in which the Russian petroleum industry is taxed, and have pointed out how, by the adoption of a policy which is short-sighted and absolutely unjustifiable, the Government is doing all in its power to go the nearest point to killing the industry that it is possible to go. On this occasion, therefore, it is unnecessary to say any more with regard to Russia than that the action of the Government stands out as a striking example of a of a consistent attempt to suck the very life blood from an industry, which, at one time had an unparalleled future, and which even to-day would be most solid, if only it were freed to some extent from those fetters of taxation in which it is now so tightly bound.

But in America, whose petroleum industry has seen remarkable expansion, thanks to a comparative freedom from unreasonable oil legislation in the years gone by, the position of the country's exploitation of its mineral oil wealth is rendered, each passing year, more difficult, and to-day the outlook is certainly very ominous. Our readers are familiar with the determined attack which has been made against that pioneer concern which has been responsible for so great a portion of America's petroleum developments, and it has been conclusively shewn by us how great will be the loss to the whole country if the policy of the President of the States is allowed to prevail with regard to the question of the concentration of capital.

It is no secret that much of the future success of America in regard to petroleum production lies in the active exploitation of the prolific areas in Oklahoma, and of late, in view of the consistent decline of the older centres of high grade oil production—the Pennsylvanian fields—the interest directed to this State by operators and producers alike, has scarcely an equal in the annals of the American petroleum industry. To a great extent, therefore, we have to look to the developments in Oklahoma as the basis for the general welfare of the American petroleum industry in the near future, and this being so, it is doubly deplorable that the Oklahoma legislature should, by copying the unwise policy of Russia, a few days ago by one stroke of the pen, have done its best to tax its young and growing petroleum industry almost out of existence. It has, doubtless, been the great progress which has overtaken Oklahoma of late in regard to the development of its petroleum resources that has caused the Legislature to recently pass two new laws relating to the taxation of oil properties, and to us, it does seem more than passing strange, that so much misconception should prevail among law makers in almost every part of the world in regard to the oil industry.

The industry ought not to be made the subject of special taxation, but is justly entitled to the same protection as that given to other industries, which not only contribute largely to the nation's commerce, but which furnish regular employment to many thousands of workers. In the case of Oklahoma, by the passing of

the two laws to which we have already referred, the oil producer has not only to bear his proportionate share of the general taxes in accordance with the assessed valuation of his property, but these special laws call upon him to contribute more than double his equitable amount of support for State purposes. On the face of it such legislation is unjust, and will naturally curtail developments in that state and upon which so many hopes for future success have been placed.

We do sincerely hope that the Oklahoma Legislature will recognise the seriousness of the false step just taken, and see the wisdom of doing all in its power not to cripple the State's oil industry, but to encourage its future development.

As in many of the producing countries, so in the consuming markets we see how petroleum and its allied products are singled out for special restriction, which, of course, in the long run, means taxation. Even in England we are only too well aware of how the oil trade is hampered by laws and by-laws which are nothing if not unreasonable. Take the case of motor spirit—that article to-day is to be found in every hamlet throughout the length and breadth of the land—how absurd have been many of the regulations drawn up, both with regard to its transport and its storage. We do not deny that reasonable care should be exercised where inflammable liquids are concerned, but the extent to which our authorities have gone in this direction is deplorably childish.

The expansion which is attending the world's petroleum industry to-day suggests in itself how great it would be if only oil were not singled out for legislation and taxation all along the line. That something can be done to remove or at least minimise this grievance of taxation we are assured, and if those interested in this branch of trade and commerce would only put their shoulders to the wheel, many of the stumbling blocks to progress would be removed. We trust that, as time goes on, we shall see that *esprit de corps* among the several ranks in the petroleum industry which is to-day only conspicuous by its absence, and then progress will be truly great.

GROSNY PRODUCTION IN FEBRUARY.

The total production of crude oil at the Grosny oil fields, in February, amounted to 5,068,925 poods, of which 2,898,350 poods were obtained by baling, and 2,170,575 poods by spouters.

The production of the various firms was as under:—

	Poods.
Akhverdoff Co.	2,150,500
Spies Petroleum Co., Ltd.	1,493,975
Anglo-Russian Maximoff Co., Ltd.	412,800
Executors of Maximoff	388,350
Kasbeck Syndicate, Ltd.	289,060
North Caucasian Oilfields, Ltd.	83,500
Russian Standard	85,870
Tcheleken-Daghestan Co.	79,870
St. Petersburg Co.	29,000
Caspian and Black Sea Society	20,300
Kholodovsky	1,000

The production by spouters was obtained by the following firms:—

	Poods.
Spies Petroleum Co., Ltd.	951,475
Akhverdoff Co.	874,000
Anglo-Russian Maximoff Co., Ltd.	345,100

THE CRISIS IN GALICIA.

EARTHEN RESERVOIRS NOW IN FAVOUR.

The over-production of crude oil in the Boryslaw-Tustanowice field, and the insufficiency of the storage accommodation available there, have brought about the crisis now reigning in the Galician petroleum industry. It is now generally recognised that adequate storage accommodation is the best protection against disturbances in the industry, but the difficulty hitherto lay in the great cost of the iron tanks, which were exclusively used, and which are beyond the means of the average producer. So far, the use of earthen reservoirs has not yet been adopted, in spite of the fact that whilst as a method of storage of crude oil they are in no way inferior to iron tanks, their cost is much less. Lately, however, a movement has become evident in Galicia in favour of earthen reservoirs, and the local engineering firm of Bielski, Lukaszewski and Co. have specialised themselves in the construction of earthen reservoirs for crude oil storage, having recently built one reservoir for the pipe line firm of Lewakowski and Co.

The most decisive argument in favour of the adoption of earthen reservoirs is their low cost, which is 30 per cent. less than that of iron tanks, and they can also be completed in a shorter time. When some old earthen reservoirs were being filled in at Boryslaw, where they were in use for some years, it was discovered that the sides of the reservoirs were saturated with oil to a depth of no more than three to four centimetres, and this combined with the earth formed a completely impervious asphalt-like mass. Such walls offer greater impermeability than iron ones, which are subjected to the influence of atmospheric changes which cause the seams to give way.

The only drawback which earthen reservoirs have, in comparison to iron tanks, is that they are not transportable. But if we take into account the cost of dismantling, transportation and re-erection, the loss of material through damaged plates, even apart from the fact that re-erected tanks are never tight, this disadvantage disappears entirely. Moreover, the total cost of removing an iron tank from one place to another may come to a larger amount than the construction of a new earthen reservoir of equal capacity.

Earthen reservoirs are pits dug in the ground to a

depth of three to four metres. The depth depends on the area available, the conditions of storage and the desired storage capacity. The factors determining the depth are on the one hand the appearance of underground water and on the other expense, which increases materially with the depth. The earth dug out is made into walls, which increases the useful height of the reservoir, and thus materially reduces the cost of the construction, as the storage room thus gained costs next to nothing and the storage capacity is greatly increased.

The roof of the reservoir rests on wooden posts placed at a distance of three to four metres from one another. The roof consists of three to four inch boards, and to make it watertight and fireproof it is covered with a double layer of pasteboard impregnated with tar. The pasteboard in turn is covered with turf, or for want of turf, with earth, on which grass is sown. The bottom of the reservoir is lined with one and a-half inch boards, and is given a moderate slope towards the centre or the sides. At the deepest places small wells are dug, in which is fixed the valve of the suction pump, used for emptying the reservoir.

In the roof are provided manholes which lead to strong ladders. There are two ventilating chimneys which for safety are provided with double Davy nets. Davy nets are also put over the manholes. The roof, as a rule, is given a slope of 4 degrees towards the sides for directing rain-water to the drainage ditches.

The sides of the reservoir may be lined with timber or left bare. In the latter case, the sides in the earth have a scarp of 1:1, and in the earth-works 1:1.25. The earthen walls are raised to 1 to 1.5 metres above the edge of the excavated pit. In cases when the walls are timber lined they are given a slope of 70 degrees to horizontal, but this, although it saves space, involve an increased cost on strong timber supports to resist the pressure of the thrown-up earth-works on the sides of the reservoir. Behind the timber lining of the sides of the reservoir clay is stamped in, and it is recommended that the latter should be abundantly poured over with oil so as to reduce the absorption of the oil stored in the reservoir.

The use of timber-lined walls is recommended for places where the ground contains gravel nests or sandstone strata, which are capable of absorbing considerable quantities of oil. In such case between the inner side of the reservoir and the gravel is to be built up a wall of clay of 60 to 80 cm. thickness, which makes the reservoir absolutely impermeable.

CLASSIFIED IMPORTS INTO UNITED KINGDOM UP TO JUNE 15th, 1908.

IN GALLONS.

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COUNTRY.	ILLUMINATING.		LUBRICATING.		RESIDUALS.		GAS OIL. (Solar)		BENZINE.		FUEL OIL.		OTHER DESCRIPTIONS.		TOTALS.	
	Since June 1.	From Jan. 1.	Since June 1.	From Jan. 1.	Since June 1.	From Jan. 1.	Since June 1.	From Jan. 1.	Since June 1.	From Jan. 1.	Since June 1.	From Jan. 1.	Since June 1.	From Jan. 1.	Since June 1.	From Jan. 1.
Austria ...	—	—	—	34,400	11,000	49,920	—	—	—	—	—	—	—	—	11,000	88,320
Belgium ...	—	—	15,825	380,134	—	36,000	—	—	—	40	1,200	1,200	—	1,440	17,025	418,814
Canada ...	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Dutch India ...	—	—	—	—	—	—	—	—	—	10,439,790	—	—	—	—	—	10,439,790
Germany ...	3,800	2,274,630	65,510	780,667	—	6,090	—	—	—	270	—	—	400	6,470	69,710	3,068,127
Holland ...	—	—	4,160	13,380	—	—	—	—	29,24	151,160	—	—	—	24,060	33,400	188,600
Roumania ...	1,781,000	5,800,700	—	—	—	2,240	759,300	6,397,780	—	2,287,520	—	—	—	—	2,540,300	14,488,240
Russia ...	1,601,000	10,601,100	94,030	2,370,835	—	187,320	556,700	556,700	1,283,230	2,761,930	—	—	—	50,000	3,531,960	16,527,804
U.S.A. ...	1,882,020	54,034,500	1,752,385	20,484,250	—	634,455	5,186,980	25,048,200	632,150	1,610,990	—	1,940,140	30,140	766,860	9,483,675	104,519,395
Other Countries	—	410	230	47,145	—	40	—	—	—	280	—	560	—	600	230	49,065
	5,267,820	72,711,370	1,932,140	24,110,811	11,000	916,065	6,502,980	32,002,680	1,944,620	17,251,980	1,200	1,941,900	30,540	849,430	15,630,300	149,788,155

THE UNION OIL COMPANY OF CALIFORNIA.

REMARKABLE INCREASE IN CAPITAL.

The Union Oil Co. of California has become a \$50,000,000 corporation, having on May 21st increased its capital stock to that figure from \$10,000,000.

The company owns more than 80,000 acres of proven and producing oil lands in 11 counties, in California. The recent capital expansion mentioned above will necessarily demand a greater production of crude and will include an increase of about 50 per cent. in the capacity of the Oleum refinery, which has already been doubled within the past 18 months. The asphaltum plant at Bakersfield will also be increased. The increase of capital also means an extension of pipe lines and also a large increase in facilities for transportation by water, requisite to the growing foreign market as well as the domestic. The company is now shipping at the rate of 275,000 barrels of fuel oil per annum to Chili, which will soon be very largely increased. The Chilean shipments now go to La Compania Selitrera Alemana at Taltal, and to the Anglo-Chilian Nitrate and Railway Co. at Tocopilla. On April 16th the company made another shipment from Port San Luis of 43,000 barrels of crude to Ancon for transshipment through the company's pipe line across the Isthmus of Panama.

The Union Oil Co. now has shipping stations at Astoria, Portland, Seatole, Stockton, San Jose, Los Angeles, San Luis, San Diego, Oakland and San Francisco. The head office of the company is now at Oleum, where the transaction of the board of directors, increasing the capital stock, was done. The branch offices, besides the stations already mentioned, are: New York, Chicago, Honolulu, Panama, Valparaiso, Tocopilla, Taltal. The tank vessels are: Steamships "Santa Maria" (52,500 barrels), "Santa Rita" (52,500), "Lansing" (50,000), "Argyle" (30,000), "Roma" (29,000), "Washtenow" (29,000), "Whittier" (11,000); barkentine "Fullerton" (16,000); ship "Santa Paula" (8,000); also several barges of various capacities operating in San Francisco bay. Pipe lines: Santa

Maria field to Pt. San Luis (two lines), Ventura field to Ventura, Orange and Los Angeles counties to San Pedro, Panama pipe line connecting Pacific and Atlantic oceans.

The increase of capital stock will all be taken by the present stockholders and by the two holding companies (the Union, Provident and the United Petroleum), which will always hold control of the Union Oil Co. of California. The sole purpose of the present expansion, so the REVIEW learns, is to provide for an augmentation of the facilities for taking care of the increasing business of the operating company.

AMERICA'S LARGEST TANK STEAMER.

To the New York Shipbuilding Co., of Camden, New Jersey, belong the credit, says our excellent contemporary, the *Mariner*, of turning out the largest vessel yet built in the United States for the transportation of oil in bulk. The "Oklahoma" was constructed to the order of the Gulf Refining Co. (J. M. Guffey Petroleum Co.), of Port Arthur, Texas, for the oil trade between Texas and Philadelphia and New York. Her maiden trip will be made to Europe, however, as she is scheduled to load 2,000,000 gallons of refined petroleum at Philadelphia for delivery abroad. It will thus be seen that her carrying capacity, compared with that of the Anglo-American Oil Co.'s Belfast built oil steamer "Iroquois" and the oil barge "Navahoe" is, roughly, some three thousand tons less.

As is usual with vessels of this type, the "Oklahoma" has her engines well aft. Her gross tonnage is 5,853 tons, and her net, 3,795 tons. She is 425 feet long, 55 feet beam and 30 feet depth of hold. The propelling machinery consists of one triple-expansion engine, with cylinders 28, 46 and 76 inches in diameter by 54-inch stroke, to which steam is supplied by two Scotch boilers, each 16.5 feet by 10.5 feet. The vessel is fitted with every modern appliance, including an instalment of Welin quadrant davits. Captain Gunter is in command of the new steamer.

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Refiners of Indian Territory and Texas Petroleum.

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SUPERIOR LUBRICATING OILS

OF HIGH VISCOSITY AND LOW COLD TEST.

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LATEST DEVELOPMENTS IN THE FERGHANA OIL FIELD.

The only petroleum producing firm in the Ferghana oil fields for the present remains the Tchimon Co. All the other firms are either wound-up or are about to be wound-up, after unsuccessful borings. Attempts at resumption of operations are being made by the Bitum Co. and the Turkestan Co., while Mr. V. Alexeieff is also said to be about to start a new borehole.

The new enterprise, the Santo Co., which has acquired some plots with small prospecting boreholes is going to start large boreholes. Prince Khilkoff, at Maila-Sai, is also starting work. The Neft Co., of Baku, has recently come on the scene, and is starting prospecting on several plots.

The Tchimon Co. are at present exploiting nine boreholes, and in the financial year 1906-7 (from 1st November) they produced 3,605,995 poods of crude oil. The new wells are now in drilling on the producing plots, one of which is expecting to reach the oil stratum at a depth of 1,120 feet. One old borehole is now undergoing repairs. In 1907, three wells were deepened below the hitherto known oil horizon, but were temporarily stopped in the early part of this year. The deepest of these is now at 1,757 feet. A well is being started in the southern wing of the oil deposit, where no wells have so far been drilled. A trial boring has been carried out, and a large diameter well is now in progress on a plot in the locality of Djar Gutan, where no wells have been drilled before. The company owns more than 30 plots.

In the financial year 1906-7, in seven wells, there were drilled altogether 3,937½ feet. During the same period five new wells were completed, the most successful of which yields 5,000 poods per 24 hours. During the same period four new wells were laid down. For working the first oil stratum no shutting off of water is needed. Up to the present, 20 wells have been laid down altogether, the first being started in 1901, and completed in September, 1904. In the current financial year four wells have been started, and the total amount of drilling work accomplished in seven wells in the first five months is 2,940 feet.

The company possesses a well-equipped petroleum refinery, which was started at the end of September, 1907. This refinery, even before it was completed, was used for eliminating the benzine from the crude oil, and this renders it suitable for fuel purposes. The output of various products from the refinery in the financial year 1906-7 was: residuals, 3,181,700 poods; benzine distillate, 178,727 poods; kerosene distillate, 36,561 poods. The balance of products left in stock on November 1st, 1907, was: residuals, 14,842 poods; benzine distillate, 38,014 poods; kerosene distillate, 36,538 poods. The largest buyers are the Central Asian Railway and a Mr. Boberman.

The above facts bring the Tchimon Co. to the front rank, and place the Ferghana oil field in the third place among Russian oil-producing fields after Baku and Grosny.

THE BAKU PETROLEUM INDUSTRY DURING THE FIRST QUARTER OF 1908.

The total production of crude oil at the Baku oil fields in the first quarter of 1908 amounted to 115,200,000 poods, against 116,800,000 poods in the corresponding quarter of 1907, which means a decrease of 1,600,000 poods.

The production of the various fields in the first quarter was as under:—

			Three months 1908.	Three months 1907.
Balakhany	..	..	15,500,000	16,500,000
Saboontchi	..	..	46,200,000	42,100,000
Ramany	..	..	18,700,000	26,200,000
Bebe-Aibat	..	..	31,800,000	32,000,000
Total	..	..	115,200,000	116,800,000

The production of the leading firms in the first quarter of the year was as under:—

			Three months 1908.	Three months 1907.
Nobel Bros.	..	..	16,613,597	16,380,101
Caspian and Black Sea Society	..	..	8,832,824	9,411,910
Mantascheff and Co.	..	..	6,470,000	4,810,228
Caspian Society	..	..	6,186,455	6,748,430
Zoubaloff	..	..	4,425,000	4,470,000
Baku Naphtha	..	..	3,914,537	5,985,644
Aramazd Co.	..	..	3,603,075	2,682,400
Russian Naphtha Co.	..	..	3,148,500	2,963,800
Pitoeff and Co.	..	..	3,121,500	5,533,356
Russian Petroleum and Liquid Fuel Co., Ltd.	..	..	3,037,000	2,193,000
Moscow-Caucasian Co.	..	..	3,007,045	3,851,798
Bibi-Eybat Petroleum Co., Ltd.	..	..	2,891,000	2,574,000
Baku Russian Pet. Co., Ltd.	..	..	2,798,041	3,128,630
Shibaieff Petroleum Co. Ltd.	..	..	2,707,129	3,373,450
Nagieff	..	..	2,676,659	2,133,010
Neft Co. (Tumaeff)	..	..	2,177,500	1,881,500
Naftalan Co.	..	..	2,158,756	2,634,668
Shikhovo Co.	..	..	1,792,609	1,385,984
Ter Akopoff Co.	..	..	1,644,352	1,313,888
European Petroleum Co., Ltd.	..	..	1,640,700	1,740,000
Mirzoeff Bros.	..	..	1,565,600	2,662,750
Tiflis Co.	..	..	1,447,000	1,298,000

The production by sputers during the first three months of this year has amounted to 5,300,000 poods, as against 4,500,000 poods during the first quarter of 1907. The production on Government lands leased out against fixed royalties per pood has, in the first quarter of 1908, amounted to 50,994,154 poods. This quantity is divided among the various fields as follows:—Balakhany, 1,264,735 poods; Saboontchi, 24,995,052 poods; Ramany, 1,357,678 poods; and Bebe-Aibat, 23,416,699 poods.

The condition of the oil fields at the end of the quarter is shewn in the following table, giving the number of wells in various stages on the 1st of April, 1908:—

	Boreholes.
In exploitation	1,748
In drilling	320
Undergoing deepening or repair	239
Producing wells being cleaned	13
Wells in drilling being repaired or cleaned	48
In trial baling	41
Undergoing water shutting	7
Inactive	1,320
Derricks in construction	45
	3,781

BORE HOLES FOR OIL

Contracted for by

JOHN M. THOM,

Canal Works,

Patricroft MANCHESTER.

CONTRACTOR TO H.M. GOVERNMENT.

THE BAKU NAPHTHA COMPANY.

REPORT FOR 1907.

The report on the operations of the Baku Naphtha Co., one of the leading concerns in the Baku oil fields, for 1907 has just been published. During the year the company realised by the sale of 21,512,979 poods of crude oil, at an average price of 26.248 copecs per pood, a sum of 5,642,690 roubles; by the sale of natural gas the company realised 62,559 roubles; interest on securities and deposits yielded 65,219 roubles; and sundry receipts, 28,704 roubles. The crude used at the wells represented a value of 561,494 roubles, and the stock of crude oil at the end of the year is valued at 54,218 roubles. The total revenue has thus amounted to 6,414,885 roubles. The total expenditure amounted to 4,148,984 roubles, and includes the following items:—Cost of drilling, 1,007,738 roubles; expenses of exploitation, 704,319 roubles (including 536,448 roubles paid in wages); and fuel and leakage, 582,895 roubles.

The net profit for the year has amounted to 2,265,901 roubles, and, after payment of Government tax, there is left 1,833,025 roubles. After deducting the 5 per cent. remuneration to the directors and the extra remuneration to the employés and adding the balance of last year's profits, we get a total sum at the disposal of the shareholders of 1,615,737 roubles. Out of this, the directors propose to distribute a dividend of 40 roubles per share on the 40,390 shares issued, and carry the balance over to this year's account. The dividends paid in the two preceding years were 37½ and 35 roubles per share respectively.

The total production of crude oil on the company's properties in 1907 amounted to 24,959,157 poods, of which 19,428,043 poods were produced at Balakhany-Saboontchi, where the company has under exploitation an area of 229½ acres of petroliferous land. In 1907, drilling was continued in 40 boreholes, commenced in 1906 and earlier, and 29 new wells were started. During the year 34 wells were completed, and in 35 wells boring was still in progress at the end of the year. The total length drilled in 1907 in 92 wells was 38,577 feet.

As regards the general condition of the Baku petroleum industry, the directors state that the Baku oil market remained firm throughout the year, but the labour movement continued to disturb the normal course of the industry. In consequence of this, the increase in production was not in proportion to the great drilling activity which was displayed on the fields. There was an increase in the cost of labour and general working expenses. The directors refer to the development of the new oil field at Surakhany, which promises to yield a good return for the fresh capital which is about to be raised for the purpose, and also improve the general position of the company.

BATOU M PETROLEUM SHIPMENTS.

The following were the shipments of petroleum products from Batoum during the week ended May 24th, o.s. (in poods):—

	Illuminating Oil.		Other Products.	
	1907.	1908.	1907.	1908.
To Europe ..	1,000	455,000	231,000	250,000
To the East ..	—	133,000	—	—
To Russian Ports.	107,000	—	8,000	—
From 1st Jan. to 24th May:—				
To Europe ..	7,086,000	4,987,000	4,446,000	4,581,000
To the East ..	5,454,000	5,538,000	111,000	29,000
To Russian Ports	1,113,000	1,504,000	66,000	33,000

THE BATOU M EXPORT TRADE DURING APRIL.

The total turnover of the Batoum petroleum trade during April may be considered as fairly satisfactory, being mainly due to the steady shipment of case oil in various directions, *i.e.*, to Turkey, Balkan States and the Near and Far East. The total shipments in April amounted to £3,802,000 poods as against 3,280,000 poods in March. The operations in the bulk oil trade also shew an increase thanks chiefly to increased shipments of kerosene to home ports. After deducting from the total of the bulk oil shipments the quantities shipped to the East and to home ports, we find that European markets have in April taken 880,000 poods of kerosene in bulk. The case oil trade remained firm throughout the month, and the prices were maintained at 193-195 copecs per case. There was also a brisk trade in lubricating oils.

The following are the figures for the arrivals and shipments of petroleum products in April and also the stocks at the end of the month (in poods):—

	Arrivals from Baku. Poods.	Shipments from Batoum. Poods.	Stocks on 30th Apl. Poods.
Refined Kerosene ..	1,104,000	2,631,000	3,982,000
Kerosene Distillate ..	—	—	80,000
Solar Oil ..	182,000	—	136,000
Machine Oil ..	451,000	596,000	811,000
Spindle Oil ..	89,000	90,000	85,000
Cylinder Oil ..	4,000	25,000	18,000
Vaseline Oil ..	—	50,000	47,000
Lubricating Oil Distillate	—	79,000	10,000
Residuals ..	388,000	323,000	418,000
Other Products..	83,000	8,000	17,000
Total ..	2,301,000	3,802,000	5,604,000

In consequence of the smallness of the arrivals, the stocks had to be drawn upon for shipments, and they, consequently, shew a decline during the month by 20 per cent.; which, however, did not have any disturbing effects on the trade.

The exports were divided among the various countries as under:—Shipments to England increased to 900,000 poods, whilst those to Germany declined to 229,000 poods. The shipments to France were only 200,000 poods; to Belgium and Holland, 191,000 poods; other countries of Western Europe, 254,000 poods; Turkey and the Balkan States, 401,000 poods; the Near East, 170,000 poods; Alexandria, one bulk cargo of 221,000 poods; and to the Far East, a bulk cargo of 316,000 poods; there was a mixed cargo of 225,000 poods for Vladivostok and Nicolaevsk. The remaining quantity of 695,000 poods was divided between Odessa and Reni.

SITUATION WANTED.

ENERGETIC YOUNG MAN (age 26), with partial training as Civil Engineer, wishes to obtain employment with a first-class Mining or Trading Company. Speaks Spanish. Accustomed to native labour. Excellent health and physique. Ride anything, and willing to rough it. Transport man, or handy man on Prospecting Outfit preferred. Is prepared to go anywhere on shortest notice.—Address: "Eleo," 17, Cintra Park, Upper Norwood, S.E.

YOUNGS' PARAFFIN LIGHT AND MINERAL OIL COMPANY, LIMITED.

The directors of the above company, in their annual report, state that after providing for maintenance of works and mines, and paying all charges the amount of credit of profit and loss accrued was £114,429 14s. 2d., which it was proposed to apportion as follows:—To general depreciation, £20,000; to retort reserve and plant replacement fund, £15,000; to exceptional outlay at works, £10,192 15s. 7d.; to interest on debenture bonds, £16,732; to dividend of seven per cent. on the ordinary shares, £31,696 11s. 2d.; to contingent dividend of eight per cent. on the B debentures bonds, £12,000; to balance carried forward, £8,808 7s. 5d., making a total of £114,429 14s. 2d. The mining and manufacturing costs were greatly increased during the year. Since March, 1907, there have been five advances on the wages of shale miners—consequent upon similar advances on the wages of coal miners—until an increase of one shilling and sixpence per day was reached. The fuel contracts, being on a sliding scale based on the wages of coal miners, their prices were gradually increased until an advance of 3s. 4d. per ton was reached, as compared with the average of the previous year. An addition to the wages of oil workers was also ceded; and purchased miscellaneous stores have been generally higher in price. In addition to the ordinary maintenance there has been expended during the year the sum of £10,192 15s. 7d. for exceptional outlay at works. It comprises mechanical stokers, fuel economisers, multi-tubular heaters, and continuous distillation plant. These are all in the direction of economy in the consumption of fuel. The amount is charged to revenue, instead of to capital, as it might have been, and is recommended to be written off. The provisions of the Workmen's Compensation Act, 1906, are much more stringent than those formerly existing, whereby the cost to the company for insurance of the workmen against accident has been increased by £1,050 per annum. The stock-in-trade shews in the balance sheet an increase of £17,426 15s. 7d. over that of last year. This is largely owing to next season's prices for solid paraffin and candles not having been fixed until the end of April, or several weeks later than in the previous year, whereby deliveries were temporarily checked. The various products in stock are valued at well below the selling prices. The capital outlay amounted to £17,060 19s. 3d., and consists of electrical pumping plant at Hopetoun and Newliston, £5,349 16s. 4d.; boring and proving on the Hopetoun, Alderstone, and Baads Estates, £2,634 8s.; rolling stock, £3,239 18s. 9d.; ammonia refrigerator with building, Uphall, £3,508 6s. 6d.; and acid recovery plant at Addiewell and Uphall, in compliance with the Alkali, etc., Works Regulation Act, 1906, £2,328 10s. 5d. A lease for 31 years, of the coals in 1,000 acres of the estate of Baads, belonging to the Right Hon. A. Akers Douglas, M.P., was entered into at Martinmas last. The field is about a mile from the company's Addiewell Works, and it is as convenient to Uphall and Hopetoun Works and mines as the collieries from which the fuel for these is now purchased. The

Hurlet coal, measuring over five feet thick, has been found near the surface, and a mine of permanent design has been driven into the seam, from which bulk quantities have been taken and tested at mines and works, and it has been proved to be suitable for general use. The company's private railway will be extended to the mine, and underground developments are being proceeded with. The company have thus, within their own resources, and for a considerable proportion of the requirements, a fuel which will be wrought at low cost, and carried into the works and mines at Addiewell by private railway, free of way leave and public railway charges.

TESTS OF ILLINOIS PETROLEUM.

The United States Geological Survey is about to issue a bulletin covering a series of tests of petroleum taken from the new Illinois field, which is now attracting much attention. The bulletin, which we reprint from the *Oil, Paint and Drug Reporter*, is as follows:—

"The importance of a systematic comparison of the different varieties of crude petroleum occurring in the United States is receiving full recognition in the United States Geological Survey, where an examination of certain oils from the new Illinois field has just been completed.

"In February of this year the Survey sent an agent into the Illinois field to collect representative samples of the oils, the localities being selected in conference with Dr. H. Foster Bain, the State Geologist. These samples were shipped to Washington, where they were examined by Dr. David T. Day, who has charge of the oil investigations. The samples were examined as to odour, colour and specific gravity, and then distilled by the Engler distillation apparatus, the quantity distilling up to 150° C. being classed as naphtha, and that between 150° and 300° C. as burning oil. The determination of the sulphur content of the oils was made in the Pittsburg laboratory of the Survey.

"The methods used in these oil tests have been selected because of their simplicity, which enables them to be carried rapidly to completion, and the treatment of all the samples in precisely the same manner affords a basis for a just comparison of the oils. In the first series of tests oils from 34 samples were examined and tests on 104 samples collected in April in the Mid-Continent field are now under way.

"The oils range in gravity from 39.5° B. in the deep wells (1,500 feet) in the Bridgeport pool to 22.3° B. in the Duncansville pool. Some of the shallow wells (300 feet) in the north end of the field also yield oils as light as 39.5° B.

"No oil was found with more than half of 1 per cent. of sulphur, and this only in the extreme north end of the field. Farther south the average is about one-fourth of 1 per cent. and the oils are acceptable as non-sulphur oils. Pipe line samples from all pools averaged still less—that is, 0.2 per cent.

"The percentage distilling below 150° C. ranged from 1 to 21, averaging 13.2 per cent. for the State. The burning oil averaged 31.2 per cent.

"Most of the oils contained practically no asphalt and considerable proportions of paraffin wax."

THE UCHTA OIL FIELD.

LATEST INFORMATION.

The Exchange Committee of Perm has received the latest information respecting the Uchta oil field. The people in the Ural and Kama districts, where as much as 11,000,000 poods of Baku oil is consumed annually, naturally take a great interest in news from these nearer oil fields.

According to these recent reports, drilling was continued in the Uchta district throughout the past winter, but by a limited number of firms. Mr. Voronoff brought one borehole down to 581 feet, and struck a spouter. Further deepening of this well, however, could not be continued, owing to some of the most important tools becoming damaged. When the tools have been repaired, drilling of the well will be continued, and a new well also started. There is a great shortage of labour, and no further supply can be obtained until the re-opening of navigation.

During the winter, many meteorological researches have been carried out. The equipment of the expedition for investigating the means of communication in the Uchta district is in full progress. Geological investigations have established the fact that, apart from petroleum, the Petchora basin, of which the Uchta district forms part, also contains copper, gold, sulphur pyrites, coal, iron ore, etc.

RECENT PETROLEUM DISCOVERY IN SPAIN.

Consul Louis J. Rosenberg, of Seville, publishes in the *Oil, Paint and Drug Reporter* the following account of the recent discovery of petroleum at the Spanish town of Villamartin:—

It appears that a little over three years ago, in making improvements in the canal leading to a flour mill, the presence of petroleum was discovered and a well was opened. At a short depth a lime rock was struck, which when broken by dynamite laid bare a large mass of ozokerite, sufficient to assure the complete success of the experiment.

In March, 1907, a company possessing about 7,000 acres was formed for the purpose of exploring, exploiting and industrially treating the petroleum. In the same month a new well was begun and petroleum was extracted at the depth of only eight meters (meter = 3.28083 feet). At 14 meters' depth the quantity of the gases of carburated hydrogen which emanated from the well was so great that the workmen were compelled to stop the drilling, and the exploration was continued by means of boring and boring machines. At 74 meters' depth a considerable quantity of gases came to the surface, which gradually increased with the depth until 79 meters were reached, when the manometer placed at the top of the sounding tube registered in 24 hours a pressure of 80 pounds. The work was discontinued until the establishment of necessary safety appliances. On December 15, 1907, a week after the required appliances had been set up, abundant petroleum of the best quality was extracted. The petroleum was found to be extraordinarily rich in benzine and in the lighter oils.

ENGLISH PATENTS.

(Specially contributed by Messrs. EDWARD EVANS & Co., Consulting Engineers, Chartered Patent Agents, and Enrolled Patent Attorneys, of the United States, of 27, Chancery Lane, London, W.C.)

APPLICATIONS FILED IN GREAT BRITAIN.

New or Improved Means for Burning Oil as Fuel and for Generating Heat therefrom.—John Eugene Koeberle, 18, Southampton Buildings, London. No. 11450 of 1908.

Improved Method of Treating Crude Petroleum.—Friedrich Seidenschuur, 7, Southampton Buildings, London. No. 10892 of 1908.

Improved Method of Treating Crude Petroleum.—Friedrich Seidenschuur, 7, Southampton Buildings, London. No. 10959 of 1908.

Improvements in Purifying Crude Petroleum or Petroleum Products or Distillates.—Dr. Lazar Edeleanu, 47, Lincoln's Inn Fields, London. No. 11140 of 1908.

APPLICATIONS PUBLISHED IN GREAT BRITAIN.

Improvements in or connected with Rock Drills.—Henry John Cubitt Keymer, of Marine Cottage, Gorleston-on-Sea, Great Yarmouth, Engineer. No. 10248 of 1907.

This relates to a rock drill which is an adaptation of a single hammer and piston type as shewn in prior Patent No. 693 of 1906, and which comprised a bushed cylinder upon which the appliance is built, and to which also a guide to the hammer and holder of the drill socket is attached in alignment, and consists in the arrangement in combination with the working cylinder of a valve chest, having fitted therein a flat circular valve seating provided with ports communicating with the working cylinder, and provided with a central pin upon which operates a flat circular valve with inlet and exhaust ports and having fixed over it a metal sheet provided with inlets, said flat valve being actuated by a projection on an oscillating sleeve by which means the operation of the hammer piston is controlled. Also in the arrangement of a sleeve around the main cylinder and hammer guide, and having an inclined slot engaged by a pin projecting from the hammer head and through a slot in the hammer guide, the reciprocation of which pin causes the sleeve to operate; and the arrangement on the oscillating sleeve of a spring actuated pawl adapted to rotate the drill socket; and also the arrangement in which a spring actuated pawl operates a ratchet wheel within a bearing provided in the valve chest, said ratchet wheel causing an adjustable shaft or rod to transmit motion to a feed screw nut or pinion upon the stem or screw. In a modification the drill socket is connected to the hammer and caused to travel therewith and is adapted to be rotated by pawl and ratchet mechanism. The head of the working cylinder or the holder is provided with a joint attachment for connecting two or more appliances.

Improvements in and connected with Rock Drills.—

Henry John Cubitt Keymer, of Marine Cottage, Gorleston-on-Sea, Great Yarmouth, Engineer. No. 10249 of 1907.

This relates to a rock drill which is an alternative construction to that specified in Patent No. 10248 of 1907, and consists in the arrangement at the upper end of the working cylinder of a valve chest, within which a duplex piston valve, or separate piston valves, operate through the intermediary of levers pivoted on said cylinder and actuated by enlargements or thickened parts on an oscillating sleeve, and the arrangement of a dust-proof cover fitted over the pathway in the oscillating sleeve, and adapted to be actuated by the guide pin of the hammer. According to a modification, pivoted levers are arranged on the hammer guide structure adapted to actuate in lieu of the oscillating sleeve the levers which operate the piston valve or valves, one of the said pivoted levers being preferably provided with a pawl to rotate the socket of the drill.

Rock Drills.—Henry John Cubitt Keymer, of Marine Cottage, Gorleston-on-Sea, Great Yarmouth, Engineer. No. 10250 of 1907.

This relates to rock drills of the type wherein the bit is rotated and also subjected to percussion and wherein the drill socket is provided with a series of orifices, and consists in the arrangement of a packing ring forming a space communicating with the orifices in order to provide for a continuous service of water or air, and also serving to prevent leakage; and the said rock drill having a dovetailed connection of the bit to the boring bar, with a hoop or band arranged to slide on the stem of the bit or the boring bar.

THE CAPACITY OF PETROLEUM REFINERIES.

IMPORTANT DEDUCTIONS.

The *Moniteur du Petrole Roumain*, in its latest issue, publishes the full text of the report of the Commission of Roumanian Refiners and presented to the Minister of Finance, of which the following is the full text:—

The producing capacity of petroleum refineries is determined according to the quantity of crude oil which each refinery is capable of treating per annum.

The only means of ascertaining the producing capacity of a refinery—in regard to the distillation of crude oil—is by taking into account the heating surface of the stills, the temperature at which the crude oil enters the stills and the duration of the distillation.

As regards the duration of the distillation, there are two distinct kinds of distillation, the continuous distillation and periodical or intermittent.

As regards the temperature at which the crude oil enters the stills, there are three principal methods of distillation.

1.—Distillation without pre-heating, in which the stills are fed with crude oil at ordinary temperature, *i.e.*, at an average of 10° C.

2.—Distillation with pre-heating the crude oil by means of the hot residuals issuing from the stills, which heats the crude oil to an average temperature of 80° C.

3.—Distillation in which the stills are fed with crude oil pre-heated by means of the hot residuals issuing from the stills and subsequently by the kerosene vapours formed. In this case the crude oil enters the stills at a minimum temperature of 135° C.

To this method of distillation may be added the method whereby the crude oil is pre-heated by means of steam.

Whatever is the method of distillation a fixed calorimetric formula can be established which can be applied in all cases. This formula is the result of the following two considerations.

1.—The quantity of heat, Q , which is transmitted from the furnace through the walls of the still, is expressed in the following formula:

$$Q = q_1 S t \text{ calories,}$$

in which

Q = the total quantity of heat transmitted through the plates of the still.

q_1 = quantity of heat transmitted per square metre of heating surface per hour.

S = Heating surface of the still (in square metres).

t = time taken in transmitting the heat to the walls of the still, in hours.

2.—On the other hand the same quantity of heat Q also results clearly from the formula:

$$Q = M Q_1 \text{ calories}$$

in which

Q = total quantity of heat transmitted through the plates of the still.

M = the mass of the crude oil, heated and partly vapourised in the still, in kilogrammes:

Q_1 = the quantity of heat required for heating and partly vapourising one kilogramme of crude oil.

3.—From the comparison of the foregoing formulæ it results:

$$Q_1 S t = M Q_1$$

or

$$M = \frac{q_1}{Q_1} S t \text{ kgrs. of crude oil (1).}$$

The formula gives us, in kilos., the quantities of crude oil which can be heated and partly vapourised during t hours through a heating surface of square metres; when we know, on the one hand, the quantity of heat q_1 which can be transmitted from the furnace into the still per square metre of heating surface per hour, and on the other hand, the quantity of heat Q_1 , necessary for heating and partly vapourising one kilo. of crude oil in the still.

We will now analyse the mode of applying the formula (1) to various methods of distilling.

A CONTINUOUS DISTILLATION.

In order to apply formula (1) to continuous distillation it is necessary first of all to be able to determine q_1 and Q_1 according to the method of distillation.

1.—Determination of the quantity of heat q_1 transmitted in one hour per square metre of heating surface.

It must be admitted that for continuous distillation one square metre of heating surface permits of the transmission into the still of at least 3,000 calories per hour. This figure corresponds to the following known fact: The continuous evaporation of water in a Corn-wall boiler produces in one hour at least 12½ kilos. of steam per square metre of heating surface. As the total heat arising from the evaporation of water is at least 640 calories per kilo. of steam, it follows that in the case of the evaporation of water in a boiler, there enters into the boiler:

$$12.5 \frac{\text{kgr. of steam}}{\text{M}^2 \text{ hour}} \times 640 \frac{\text{calories}}{\text{kgr. of steam}} = \frac{\text{calories}}{8,000 \text{ M}^2 \text{ hour}}$$

Thus, the evaporation of water in boilers and the distillation of crude oil in stills require a quantity of heat of:

$$q_1 = 3,000 \frac{\text{calories}}{\text{M}^2 \text{ hour}}$$

2.—Determination of the quantity of heat Q_1 required for heating and partly vapourising one kilo. of crude oil.

The heat Q_1 depends amongst other things on the temperature of the crude oil fed into the stills. We shall, therefore, determine Q_1 in the various cases, which may occur in practice:

(a) The case when the distillation is done with pre-heating by means of the residuals and kerosene vapours. In this case the crude oil passes from the pre-heater into the first still at a minimum temperature of 135° C. When issuing from the last still the temperature of the residuals is 310° C. to 320° C. when gas oil is also distilled off, and 300° C. when kerosene only is distilled. But as only part of the crude oil is heated to the last-mentioned temperature, the largest being distilled over between 135° C. and 300° C. to 320° C. the maximum heating temperature is considered to be 270° C.

We will admit besides the case when Bustenari crude oil is distilled, which is considered as the standard for Roumanian oil. This oil distils 55 per cent. of its quantity. We shall further take as the specific heat of the crude oil and its products the maximum figure of $C = 0.5$ and as the heat for vapourising—the maximum

$$\text{figure of } L = 80 \frac{\text{calories}}{\text{kilos.}}$$

With these data we may calculate Q_1 , which comprise two parts, namely:—

(1) The heat required in one still for one kilo of crude oil from 135 to 270° C. is expressed by the calorimetric formula $mc(t_2 - t_1)$ calories, and in this case:

$$M = 1 \text{ kg. of crude oil; } C = 0.5; t_2 = 270^\circ \text{ C. and } t_1 = 135^\circ \text{ C., therefore } 1 \times 0.5 \times (270 - 135^\circ \text{ C.}) = 67.5 \text{ calories.}$$

2.—The heat required for vapourising in one still, 0.55 kg. of oil is translated into the following calorimetric formula: $M \cdot L$ calories, and in this case:—

$$m_1 = 0.55 \text{ K; } L = 80 \frac{\text{calories}}{\text{kgrs.}}; \text{ hence:}$$

$$0.55 \times 80 = 44 \text{ calories.}$$

Consequently, in this case there is required a maximum of:

$$Q_1 = 67.5 + 44 = 111.5 \text{ calories}$$

to heat up and partly vaporise a kilo. of crude oil in one still, when the stills are provided with pre-heaters, working with the residuals and kerosene vapours.

(b) In case when the distillation is carried on with pre-heating by residuals only, the crude oil enters the still

at a temperature of 80° C., and the value of Q_1 works out as follows:

$$Q_1 = m c (t_2 - t_1) + m_1 L = 1 \times 0.5 (270 - 80) + 0.55 \times 80 = 139 \text{ calories.}$$

(c) In cases where no pre-heater is used for distilling, the crude oil enters the still at a temperature of 10° C., and Q_1 works out as follows:—

$$Q_1 = m c (t_2 - t_1) + m_1 L = 1 \text{ kg.} \times 0.5 (270 - 10) + 0.55 \times 80 = 174 \text{ calories.}$$

3.—Determination of the producing capacity of petroleum refineries with continuous distillation.

It is now easy to determine the quantity of crude oil treated on heating surface S , and in the lapse of time t , when the distillation is continuous, in the several cases occurring in practice.

(a) In cases where the continuous distillation is done with pre-heating with residuals and kerosene vapours, the formula (1) will be:

$$M = \frac{q_1}{Q_1} S t$$

calories calories

$$\text{In this case } q_1 = 8,000 \frac{\text{calories}}{\text{M}^2 \text{ hours}}, Q_1 = 111.5 \frac{\text{calories}}{\text{kgrs.}}$$

and this gives us:—

$$M = \frac{8,000}{111.5} S t \text{ kgrs. of Crude Oil,}$$

and for $S = 1 \text{ m}^2$ and $t = 1 \text{ hour}$, we have:

$$M_1 = 71.8 \frac{\text{kg. of crude}}{\text{M}^2 \text{ hours}}$$

and per day ($t = 24 \text{ hours}$)

$$M_{11} = 71.8 \times 24 S = 1725.6 S \frac{\text{kgr.}}{\text{day}}$$

and for one year of 320 working days, the working capacity of the stills for continuous distillation will be:

$$M - \text{year} = 71.8 \times 24 \times 320 S \frac{\text{kgs. crude}}{\text{year}} = 55.1 S \frac{\text{waggons}}{\text{year}}$$

In other words—a refinery with continuous distillation and pre-heating with residuals and kerosene vapours and possessing a heating surface of the stills proper of $S \text{ m}^2$, can treat 55.2 S. waggons of crude oil.

(b) In cases when the continuous distillation is done with superheating by residuals only, we have:

$$Q_1 = 8,000 \frac{\text{calories}}{\text{M}^2 \text{ hour}}; Q_1 = 139 \frac{\text{calories}}{\text{kgr.}}$$

$$\text{Therefore: } M = \frac{8,000}{139} S t = 57.5 \text{ kgr. of crude oil or}$$

per square metre per hour ($S = 1 \text{ m}^2$; $mt = 1 \text{ hour}$):

$$M_1 = 57.5 \frac{\text{kgr.}}{\text{M}^2 \text{ hour.}}$$

and per day:

$$M_2 = 57.5 \times 24 S \frac{\text{kgrs.}}{\text{day}} = 139 S \frac{\text{kgr.}}{\text{days}}$$

and per annum:

$$M = 57.5 \times 24 \times 320 S \frac{\text{kgrs.}}{\text{year}} = 44.1 S \frac{\text{waggons}}{\text{year}}$$

or:

$$M = 44.1 S \frac{\text{waggons}}{\text{year}}$$

In other words: a refinery with continuous distillation and pre-heating by residuals and the still proper of which have a heating surface of $S \text{ m}^2$ can treat 44.1 S waggons of crude oil per annum.

(c) In cases when the continuous distillation is done without pre-heating, we have:

$$q_1 = 8,000 \frac{\text{calories}}{\text{m}^2 \text{ hours}}; Q_1 = 174 \frac{\text{calories}}{\text{kgrs.}}$$

or:

$$M = \frac{8000}{174} S t = 46 S t \text{ kgr. of crude oil and per square metre per hour:}$$

$$M_1 = 46 \frac{\text{kgr}}{\text{M}^2 \text{ hour}}$$

and per day:

$$M \text{ day} = 46 \times 24 S \frac{\text{kgr.}}{\text{day}} = 1,104 S \frac{\text{kgr.}}{\text{day}}$$

and per year:

$$M \text{ year} = 46 \times 24 \times 320 S \frac{\text{kgr.}}{\text{year}}$$

$$\text{or: } M \text{ year} = 35.3 S \frac{\text{waggons}}{\text{year}}$$

or, in other words: a refinery with a continuous distillation without pre-heater, and the stills of which have a heating surface of S square metres, can treat 35.3 S waggons of crude oil per annum.

B.—INTERMITTENT DISTILLATION.

For this method of distillation formula (1) is equally applicable; the heat units q_1 and Q_1 will be respectively the same as for continuous distillation. As regards the time t , it will be necessary to bear in mind the duration t_1 of the filling, of emptying, of the cooling of the initial heating, and eventually of the variation in the heating surface, when the same is gradually reduced as the crude oil becomes evaporated, for it is necessary to calculate the heating surface not only of the part filled with liquid, which is a conductor of heat, but also the surface corresponding to the vapours which are isolators.

This duration t_1 varies between 4 and 8 hours for the filling and emptying, and between 4 and 8 hours for the cooling and initial heating. The first duration applies to refineries with intermittent stills, but with pre-heaters, as well as to small refineries which have no pre-heaters. As to the last-mentioned duration, this applies to large refineries which work without pre-heaters. Thus, for intermittent distillation, besides time t , corresponding to the distillation proper, which is to be calculated in the same way as for a similar installation of the continuous system, it is necessary to bear in mind the duration t_1 , above mentioned.

The following are a few examples of this calculation:

1.—We will take a refinery with intermittent distillation and with pre-heaters by residuals and kerosene vapours.

In this case:

$$q_1 = 8,000 \frac{\text{calories}}{\text{M}^2 \text{ hour}}; Q_1 = 111.5 \frac{\text{calories}}{\text{kgr.}}$$

We will suppose that the refinery possesses 12 stills of a capacity of 5.3 waggons of crude oil representing a total heating surface of 950 m^2 . If this refinery would continue, it could treat:

$$M = \frac{8,000}{111.5} \times 950 \times 24 \frac{\text{kgr. crude}}{\text{day}} = 163.7 \frac{\text{waggons}}{\text{day}}$$

Consequently, the charge of the stills being $5.3 \times 12 = 63.6$ waggons, the time required for the distillation is

$$t = \frac{63.6 \times 24}{163.7} \text{ hours. Therefore the complete distil-}$$

lation will be effected in $t = 9.3$ hours. If we add the duration $t = 4 + 4 = 8$ hours for emptying, we get a duration of $T = 9.3 + 8 = 17.3$ hours.

Thus in one day of 24 hours there will be distilled a quantity of crude oil of:

$$M_1 = \frac{63.6 \times 24}{17.3} \frac{\text{waggons}}{\text{day}} = 88.2 \frac{\text{waggons}}{\text{day}}$$

and per year:

$$M = 88.2 \times 320 = 28,224 \frac{\text{waggons}}{\text{day}}$$

2.—If we take a refinery where the distillation is intermittent and without pre-heating, we get:

$$q_1 = 8,000 \frac{\text{calories}}{\text{M}^2 \text{ hour}}; Q_1 = 174 \frac{\text{calories}}{\text{kg.}}$$

Supposing that this refinery possesses 12 stills of a capacity of 7.9 waggons each and a total heating surface of $S = 660 \text{ m}^2$.

If the distillation were continuous, it would be possible to treat per day:

$$M = \frac{q_1}{Q_1} \times S \times 24 = \frac{8000}{174} \times 660 \times 24 = 72.8 \text{ waggons day}$$

Consequently the complete distillation will be effected in:

$$t = \frac{94.8 \times 24}{72.8} = 31.2$$

In this case it is necessary to add to the time:

$$t_1 = 8 + 8 = 16 \text{ hours}$$

The total time taken would therefore be:

$$T = 31.2 + 16 = 47.2 \text{ hours.}$$

Consequently, in one day of 24 hours there will be distilled a quantity of

$$M = \frac{94.8 \times 24}{47.2} = 48.2 \text{ waggons days}$$

Thus the annual distilling capacity of such refinery will be:

$$M = 48.2 \times 320 \frac{\text{waggons}}{\text{year}} = 15,424 \frac{\text{waggons}}{\text{year}}$$

The report is signed by Prof. D. G. Many, the Reporter of the Commission, and by the Members of the Commission, who are:—Dr. L. Edeleanu (President), Dr. Berguer, Dr. Bossel and Mr. W. C. Brower.

The American Oil Market.

New York, Week ended June 6th.

There has been a substantial increase in operations in the Eastern fields within the week, and the prospects are believed to be favourable for a maintenance of the more active developments. Work has been especially stimulated in Illinois, but the gain in new production has not been of proportionate extent. The most creditable record has been scored in West Virginia, the new production being nearly three times of that of the previous week, although the gain in operations did not exceed six completions. Brooke county, in the latter State, has contributed largely to the successful developments of the week, seven of eight new wells drilled yielding an aggregate of 635 barrels. Most of these were within the Follansbee pool, says the *Oil, Faint and Drug Reporter*, and raised the total production of that formation to 3,395 barrels a day. Operators are encouraged that the regularity of the formation will furnish other equally gratifying results within the defined limits. A new high mark was established in the capacity of Holliday's Cove wells in the same county at 1,510 barrels. In this development there is a better outlook for an extension to the producing area than in the Follansbee district, and considerable new work is in progress in advance of recent completions. In the Follansbee, Holliday's Cove and Wellsburg pools of Brooke county more than 30 wells were completed during May, of which number six were dusters and two gas wells. The fourth sand gusher of Batelle district, Monongalia county, West Virginia, which, as noted previously, came in at the rate of 325 barrels a day, has shewn a marked decline during the interval, a late report placing its capacity at 120 barrels a day. The good producer that was drilled about a month ago in the same district has sustained a more creditable record, being still reported good for 200 barrels a day. The review for May of the high grade fields of West Virginia, Pennsylvania, South-eastern Ohio and New York indicates a general gain, 550 wells having been completed, more than for any month since last November. The new production totaled 4,924 barrels, which establishes a high record for the last ten months. The average new production per successful

oil well for May is raised to $11\frac{1}{3}$ barrels. While the returns from the Lima fields of North-western Ohio and Indiana were more favourable for May than during the previous month, our correspondent writes rather discouragingly on the prospects for a revival of activity there, more than 400 of the old wells being reported to have been pulled out last month. Illinois operations have been further stimulated during the week, but the new production has not been of correspondingly increased proportions. Every effort is being stimulated to keep the production of the California fields up to the unusually heavy demand, a total of 3,500,000 barrels having been marketed during May. The industry is in its most prosperous state and there is apparently nothing to check the favourable outlook.

REFINED AND PRODUCTS.—Continued activity for export remains the distinguishing feature of the local market for refined, a substantial increase having been scored over the record of the previous week. The aggregate of the clearances for the week under review comprises 17,558,330 gallons, of which 9,550,000 were forwarded in bulk. Of the later amount 8,000,000 gallons are destined for Flushing. For the former week we recorded a total of 10,205,190 gallons. Chartering for prompt or forward account has, on the other hand, been unusually dull and there are no new engagements to report. Domestic trading has continued moderate, a condition that is wholly incident to the season of lengthening days. Prices have ruled with apparently the same measure of firmness throughout. The interval has brought little of supplementary interest in the various products, the demand for which has been reported to be of fairly average proportions at lately prevailing quotations. The activity of foreign requirements for naphtha has been sustained during the interval, clearances for the week aggregating 1,821,530 gallons, against 1,647,565 gallons, as previously noted.

CLOSING QUOTATIONS.

	CRUDE.	Week ended	
		May 30. 1908.	June 6. 1908.
Pennsylvania crude in 'bbls.	—	—
Pennsylvania crude in bulk	—	—
Residuum, bbls. for export	—	—

REFINED—FOR EXPORT.

	In cents.	Week ended	
		June 6.	
		S.W.	W.W.
Barrels, cargo	per gal.	8.75	@ 10.75
Philadelphia .. ..	.. ..	8.70	@ 10.70
Bulk, New York .. ..	.. ..	5.00	@ 7.00
Bulk, Philadelphia .. ..	.. ..	4.95	@ 6.95
Cases, New York .. ..	.. ..	10.90	@ 13.90
Cases Philadelphia .. ..	.. ..	10.85	@ 13.85

PENNSYLVANIAN OIL RUNS from May 20th to June 3rd were:—May 20th, 102,865; May 21st, 218,163¹; May 22nd and 23rd, 261,714¹; May 24th, 166,628; May 25th, 207,078; May 28th, 29th and 30th, 417,600¹; May 31st, 138,128¹; June 1st, 182,627¹; June 2nd, 203,096; and June 3rd, 91,107.

¹ Includes Illinois Oil.

THE DELIVERIES OF PENNSYLVANIAN OIL from May 21st to June 4th were:—May 21st, 237,690; May 22nd, 166,978¹; May 23rd and 24th, 291,615; May 25th, 252,533; May 26th, 177,318; May 29th, 30th and 31st, 548,632¹; June 1st, 198,486; June 2nd, 224,197¹; June 3rd, 214,015; and June 4th, 145,248.

¹ Includes Illinois Oil.

CLEARANCES FOR THE WEEK.

During the week ended June 5th and since Jan. 1, the clearances of petroleum, in gallons, from the port of New York, were as follows:—

	Week.	Year.	1907.
Refined	17,558,330	259,411,718	227,432,120
Crude	920,460	12,838,275	1,039,879
Naphtha	1,821,530	7,731,060	2,800,200
Residuum	13,500	687,850	322,700

EXPORT STATISTICS.

The total exports from the port of New York and from the United States have been:—

	Gallons.
From New York, week ended June 5th	24,331,567
Total from New York, from Jan. 1st, 1908	372,073,896
Same period last year	303,275,472
Increase	68,798,424
From United States, week ended June 5th	45,517,755
Total from United States, since Jan. 1st, 1908	658,314,905
Same period last year	548,673,831
Increase	110,641,074

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The "Review" Shipping List.

JUNE 19, 1908.

(The following abbreviations are used in this table:—L. Left; P. Passed; Arr. Arrived; Sp. Spoken; Tr. Trading.)

Vessel.	From	For	Latest Date and Position.	Vessel.	From.	For.	Latest Date and Position.
ALCHYMIST	Stockholm ..	Bilbao	P. Shoreham, June 12	ERIVAN	Batoum	Dunkirk	Arr. June 13
ALEMBIC	Lisbon	Ardrossan ..	Arr. June 6	ETELKA	Batoum	Antwerp	L. June 10
ALICE ISABELLE ..	New York ..	Sables d'Olonne	L. June 3	EUPLECTELA	Shanghai ..	Palembang..	L. June 7
AMERICAN	New York ..	Antwerp	In Port, June 16	EXCELSIOR	Rotterdam ..	New York ..	P. Scilly, June 14
APPALACHEE	Moji	San Francisco	In Port, June 4	EZIO	—	—	Coasting Peru
APSCHERON	Thameshaven	Batoum	P. Dover, June 10	FRANCE MARIE ..	New York ..	Tarragona ..	L. May 16
ARAL	Tyne	Philadelphia	L. June 17	GEESTEMUNDE ..	Hamburg ..	Philadelphia	L. Tyne, June 3
ARAS	Philadelphia	Manchester..	P. Del. Break., June 6	GENESSE	Manchester	Liverpool ..	In Port, June 16
ARGYLL	—	—	Coasting U.S. (Pacific)	GEORGIAN	Tyne	Novorossisk	Arr. June 16
ASHTABULA	Shanghai ..	San Francisco	Arr. June 12	PRINCE GOLDMOUTH	Singap re ..	Europe	P. Gibraltar, June 14-15
ASTRAKHAN	Tyne	Philadelphia	Arr. June 11	GUTHEIL	Philadelphia	Hamburg ..	In Port, June 16
ATLAS	—	—	Coasting U.S. (Pacific)	HAINAUT	Antwerp	Ergasteria ..	Arr. June 11
AUGUSTA	Belfast	Philadelphia	L. June 16	HARRY WADSWORTH	Port Arthur (Texas)	Liverpool ..	In Port, June 16
AUGUST KORFF ..	Philadelphia	Manchester	Arr. June 17	HELIOS	New York ..	Bremen	Arr. June 12
AUREOLE	Bremerhaven	Antwerp	In Port, June 16	HERMIONE	Philadelphia	Hamburg ..	L. June 13
AZOV	—	—	Trading on W.C. of South Amca	HOTHAM NEWTON	Kustendje ..	Blaye	Arr. June 15
BAKU STANDARD	Novorossisk	Thameshaven	Arr. June 15	IMPERIAL	—	—	Tr. on Lakes btn. U.S.A. and Can.
BALAKANI	Newport Nws	Sunderland ..	L. June 12	IOANNIS COUTZIS	Cardiff	Kustendje ..	P. Constant'ple, June 10
BATOUM	Thameshaven	Philadelphia	Arr. June 10	IRIS ..	Ferrandina	London	L. June 4
BAYONNE	Batoum	Amsterdam	Arr. June 15	IROQUOIS	London	New York ..	Arr. June 13
BEACON LIGHT ..	Boston	Havana	L. June 14	J.B.AUG.KESSLER	Rotterdam ..	—	P. Ma'ta, June 16
BLOOMFIELD	Penarth	Antwerp	In Port, June 16	JAMES BRAND	Port Arthur (Texas)	Manchester	P. Cape Henry, June 4
BORJOM	Batoum	Alexandria ..	Arr. June 9	JULES HENRI	New York ..	Marseilles ..	L. June 15
BRILLIANT	Stettin	Tyne	P. Elsinore, June 14	KURA	Philadelphia	Avonmouth..	L. June 8
BROADMAYNE	Tyne	Batoum	Cld. Constant'ple, June 4	LA CAMPINE	Antwerp	Philadelphia	Arr. June 7
BULLMOUTH	Balekappan	Hankow	L. June 9	LA FLANDRE	Ghent	New York ..	Arr. June 7
LULYSSES	Samboe	Europe	At Colombo, June 13	LA HESBAYE	Antwerp ..	Philadelphia	Off Del. Break., June 9
BURGERMEISTER PETERSEN	Aarhuus	New York ..	P. Dunnet Head, June 4	LACKAWANNA	Messina	Kustendje ..	Cld. Constant'ple, June 10
BUYO MARU	Calcutta	Palembang..	L. May 23	LANSING	San Francisco	Taltal	L. May 23
CALCUTTA	Shanghai ..	San Francisco	Arr. June 8	LE COQ	New York ..	La Pallice ..	L. June 9
CAPTAIN A. F. LUCAS	New York ..	Flushing....	Off Nantucket, June 7	LOUTSCH	—	Odessa	In Port, May 6
CARDIUM	Hankow	Balekappan	Arr. June 10	LUCERNA	New York ..	Rouen	L. June 5
CARPATHIAN	—	—	L'nched, Walker, May 18	LUCILINE	Algiers	Havre and Rouen	L. June 15
CATANIA	—	—	Coasting U.S. (Pacific)	LUMEN	Batoum	Hull	Cld. Constant'ple, June 12
CAUCASIAN	London	New York ..	P. Lizard, June 14	LUX	New York ..	Alicante	L. June 4
CHARLOIS	Amsterdam..	Philadelphia	Arr. June 8	MAKKAWEI	Cette	Batoum	L. June 10
CHESAPEAKE	Liverpool ..	New York ..	Arr. June 12	MANHATTAN	Antwerp....	Cardiff	In Port, June 16
CHESTER ..	Baltimore ..	Antwerp	In Port, June 16	MANNHEIM	Philadelphia	Copenhagen	In Port, June 15
CIRCASIAN ..	—	—	Trading on W.C. of South Amca.	MARGARETHA ..	Genoa	Batoum	Cld. Constant'ple, June 7
CITY OF EVERETT	London	Barry & New York	P. Southend, June 17	METEOR	Thameshaven & Portland	Batoum	Cld. Constant'ple, June 5
CINDAD DE RENS	Philadelphia	Cette	P. Del. Break., June 2	MEXICAN PRINCE	Kustendje ..	Rouen	P. Sagres, June 13
CLAM	Moss	Tyne	Arr. June 17	MIRA	Tyne	Port Arthur	P. Butt of Lewis, June 11
CLEMATIS	Antwerp	Brunswick (Ga.)	Arr. June 10	MUREX	Balekappan	Singapore ..	L. June 14
COL. E. L. DRAKE	San Francisco	Seattle	P. Tatoosh, June 3	NARRAGANSETT..	London	New York ..	Arr. June 10
COWRIE	Alexandria..	Port Said ..	Arr. June 16-17	NERITE	—	—	Tr. in China Seas
CUYAHOGA	Philadelphia	Calcutta	L. Algiers, June 11	NEW YORK	Rotterdam ..	New York ..	Arr. June 16
CYMBELINE	Amsterdam..	Port Arthur (Texas)	P. Dungeness, June 1	OAKWOOD	Cienfuegos..	Liverpool ..	L. June 9
CZAR NICOLAI II.	Batoum	Hamburg ..	In Port, June 16	OBERON	Philadelphia	Hamburg ..	P. Dover, June 17
DAGHESTAN	Hamburg and Tyne	Batoum	Off the Wight, June 7	OCEAN	Antwerp	Philadelphia	At New York, June 9
DAKOTAH	Balekappan	San Francisco	L. May 20	OILFIELD	Tyne	Constant'ple	P. Gibraltar, June 12-13
DELAWARE	Philadelphia	Barrow	Arr. June 12	ORIFLAMME	—	Kustendje ..	P. Pera, June 18
DERBENT	Antwerp	Batoum	P. Constant'ple, June 16	OSCEOLA	New York ..	Buenos Aires	P. Barry Island, June 13
DEUTSCHLAND ..	New York ..	Hamburg ..	In Port, June 16	OTTAWA	Liverpool ..	New Orleans	P. O. Hd. Kinsale, June 15
DIAMANT	New York ..	Rotterdam ..	L. June 10	OURAL	Manchester	Batoum	Arr. June 14
EDWARD DAWSON	Galveston ..	Port Arthur (Texas)	Arr. May 30	PALEMBANG	—	—	Tr. East Indies & China Seas
ELAX	Scesoe	Hong Kong	Arr. June 15	PAULA	Tyne	Philadelphia	Arr. June 15
ELISE MARIE	New York ..	Swinemunde	L. June 11	PECTAN	London	Port Arthur (Texas)	P. Scilly, June 15
ENERGIE	Philadelphia	Hamburg ..	Off the Wight, June 13				

Vessel.	From	For.	Latest Date and Position.	Vessel.	From.	For.	Latest Date and Position.
PENNOIL.....	Tyne	Philadelphia	L. June 11	SNOWFLAKE.....	Tyne	Philadelphia	P. Dunnet Head, June 8
PERLAK	Singapore ..	Soesoe.....	L. April 14	SOYO MARU	Gaviota	Japan	L. May 27
PHOEBUS	Hamburg ..	New York ..	P. Butt of Lewis, June 17	SPONDILUS	Samboe	Europe	P. Gibraltar, June 17
PINNA	Yokohama ..	Gaviota	L. June 2	STANDARD	New York ..	Swinemunde.	P. Dunnet Head, June 17
POTOMAC	Philadelphia	Avonmouth..	In Port, June 16	STROMBUS	New York ..	Calcutta....	L. June 4
PROGRESSO	Port Arthur	Buenos Ayres	L. Mar. 13	SULTAN VAN LANGKAT	Hong Kong	Palembang..	L. May 4
PROMETHEUS....	New York ..	Rotterdam..	P. Lizard, June 17	SUN	Philadelphia	Sabine Pass	L. June 5
PRUDENTIA	Hong Kong .	Balekappan	L. May 16	SUNLIGHT.....	Calais	Philadelphia	Sp. June 16, 38 mls. S.S.E. Lizard
QUEVILLY.....	Rouen.....	New York ..	L. Havre, May 2	SURAM.....	Port Arthur (Texas)	Hull.....	L. June 7
RION	Batoum	Manchester	Cld. Constant'ple, June 9	SUWANEE	Kustendje ..	London	P. Sagres, June 16
ROCK LIGHT	—	Braila & Sulina	P. Ushant, June 15	SVIET	Alexandria..	Batoum	P. Dardenelles, June 9
ROMA	San Francisco	Pt. San Luis	L. May 28	TELENA	Barrow	Cardiff.....	In Port, June 15
ROMANY.....	Saketoyo....	Balekappan	L. June 8	TEREK.....	Philadelphia	Messina	L. June 10
ROTTERDAM	New York ..	Amsterdam..	L. June 5	TIFLIS	Antwerp	Batoum	P. Constant'ple, June 14
RUSSIAN PRINCE	Banes	—	L. June 16	TIOGA	London	New Orleans	P. Beachy Head, June 12
SALAHADJI	—	—	Tr. Sts. Settlem'ts and Java Seas	TONAWANDA	San Francisco	Muroran....	L. May 18
S.O. (Barge No. 94)...	London	Barry & New York	P. Southend, June 17	TROCAS	Balekappan	Singapore ..	Arr. June 10
SAN CRISTOBAL..	Rochester ..	Minatitlan ..	P. Sand Key, April 9	TUSCARORA	San Francisco	Muroran	Sd. Victoria (B.C.) June 5
SAN IGNACIO DE LOYOLA	Philadelphia	Pasages	P. Del. Break., May 12	VEDRA.....	Balekappan	Calcutta	L. June 4
SANTA MARIA....	Pt. San Luis	Panama	L. May 30	VILLE DE DIEPPE	Philadelphia	Rouen	P. Del. Break, May 30
SANTA RITA.....	Port Harford	San Francisco	Arr. May 21	VOLUTE	Freshwater..	Tientsin	L. June 15
SAXOLEINE	Dartmouth..	New York ..	P. Prawle Pt., June 14	WASHINGTON....	Bombay	Bengkalis ..	L. June 1
SEMINOLE.....	San Francisco	Hankow	At Shanghai, June 9	WEEHAWKEN	Baltimore ..	Lisbon	P. Cap. Henry, June 6
SERVIAN	London	Philadelphia	P. Lizard, June 15	WILLKOMMEN....	Stettin.....	Tyne	Arr. June 13
SINGU	—	—	Tr. in East Indies	WINNEBAGO	Moji.....	San Francisco	Arr. June 5
				ZWYNDRECHT ..	Banes	London	Arr. June 15

Latest Market Intelligence.

LONDON OIL MARKET.

Supplied by Messrs. Benjamin & Gee, 31, St. Mary Axe, E.C.

June 19th, 1908.

Refined Petroleum is unaltered in price as follows:—Russian, 5½d. to 6d.; American, 6½d. to 6¾d.; Water White, 7½d. to 7¾d.; Roumanian, 6¾d.

LUBRICATING OILS.

The latest quotations are:—

American pale, £7 2s. 6d. to £10 15s.

American dark cylinder, from £8 10s.

American filtered cylinder, from £11 15s.

No. 1 Russian, £10 5s.

TURPENTINE.

American Turpentine has been fairly steady at the low price quoted in our last report, and for Spot is a little better, namely, 31s. 3d.; the quotations for July to August, 31s.; July to December, 31s. 6d.

LIVERPOOL OIL MARKET.

June 18th.

Refined oils are quiet, and sellers quote 6¾d. for Russian, Galician or Roumanian; and 7¼d. to 8¼d. per gallon for American.

PETROLEUM SPIRIT continues at 1s. 0½d. to 1s. 3d. per gallon for American deodorised, according to quality on the spot.

LATEST AMERICAN PRICES.

NEW YORK, June 17th.

Refined, in cases, is steady at 10.90; Standard White, 8.75; Credit balances, 1.78c.

PHILADELPHIA, June 17th.

Standard White is still quoted at 8.70.

RUSSIA.

BAKU, June 13th.

The Baku oil market is unchanged. Crude oil, spot, 22¼-22¾ copecs per pood. Residuals, future delivery, 23½ copecs. Kerosene, in ships, 30 copecs.

BELGIUM.

ANTWERP, June 15th.

The petroleum market is firm. Price of Standard White, spot, 22 francs per 100 kilos.

FRANCE.

PARIS, June 15th.

Illuminating oil is quoted in bulk, in whole tank waggons, 21 francs per hectolitre; spirit, 31.75 francs per hectolitre. Special white oil, in barrels or cans, 29 francs per hectolitre.

GERMANY.

HAMBURG, June 15th.

The kerosene market is quiet. The price of American Standard White is 7.55 marks per 50 kilos; Russian, 7.35 marks.

ROUMANIA.

June 15th.

Crude oil from different fields, including	Francs.
pipe line charges, per 100 kgs. ...	4.40-4.60
Refined oil, exclusive of taxes, ex. refinery ..	8.00-9.00
Benzine, 717-720, including taxes ...	20.00
Benzine, 750-760 ...	15.00-15.50
Residuals in tank waggons, at refinery ...	3.90-4.00
Paraffin ...	120.00

PRICES FOR EXPORT.

Refined oil, f.o.b., per 100 kgs. ...	7.50-8.00
Benzine, sp. gr. 0.710-0.715, f.o.b. ...	17.00-18.00
" sp. gr. 0.715-0.720 " ...	15.00-16.00
" sp. gr. 0.730-0.740 " ...	10.00-11.00
" sp. gr. 0.745-0.755 " ...	9.00-10.00

INDIA.

BOMBAY, June 2nd.

The market is firm.

Standard Oil Co., of New York.

Current rates are:—

American, "Snowflake," 150 deg. ..	Rs. 6 4 2
" Chester, 76 deg. ..	4 12 2
" Monkey Brand, 76 deg. ..	4 6 2
" Bulk, 125 deg. (in local made tins) ..	3 14 0
" " 125 deg. (8 Imperial gallons) ..	3 4 0

The Asiatic Petroleum Company, Limited.

Current rates are:—

Burmah, bulk, loose, "Swan," per unit ..	2 14 0
" new, tins, "Swan," per pair ..	3 8 0
Russian, bulk, loose, "Rising Sun," per unit ..	3 6 0
" new, tins, "Rising Sun," per pair ..	4 0 0
" Anchor," cases, per case ..	4 8 0

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IMPORTS of PETROLEUM into UNITED KINGDOM

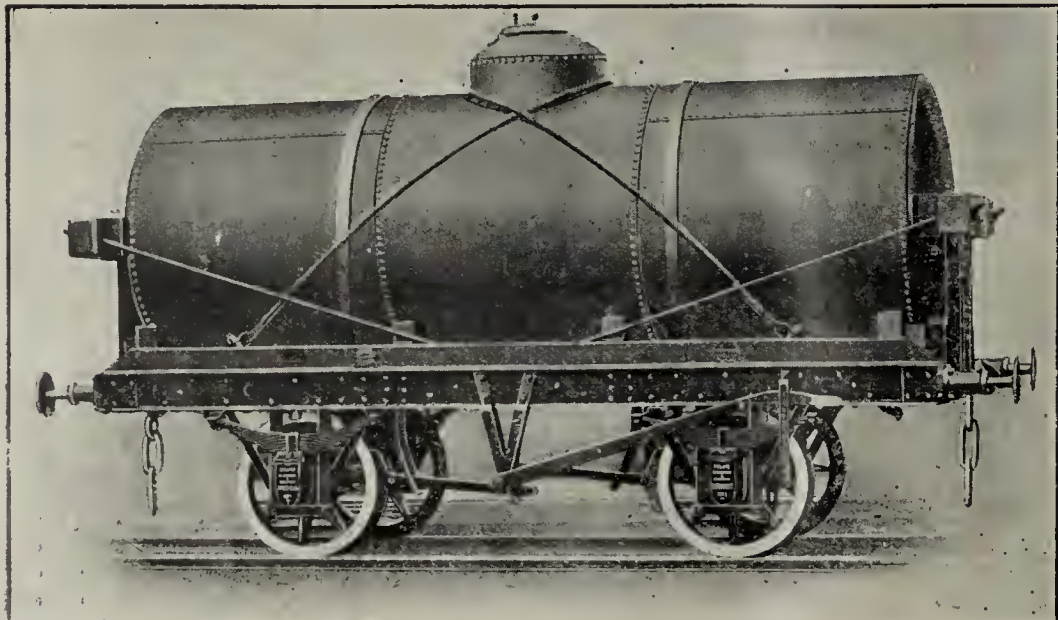
Specially prepared for .
this Journal by . . .
the Custom House. .

FOR THE WEEK ENDED 8TH JUNE, 1908—

DATE.	PORT AND IMPORTERS.	DESCRIP- TION.	NO. OF GALS.	PORT WHENCE.
June.	LONDON—			
2	Mordaunt Bros. . .	Lub.	6,200	New York
2	Produce Brokers' Co. . .	"	2,400	"
2	Anglo-American Oil Co. . .	"	29,080	Philadel.
2	British Petroleum Co. . .	Lamp (Caucasian)	1,781,000	Kustendje
2	J. Harrison . . .	Lub. Gr.	220	Antwerp
2	London and India Dock Co. . .	Lub.	30	Hamburg
2	W. H. Muller and Co. . .	Lub. Gr.	30	Rotterdam
3	G. Haller and Co. . .	"	90	Antwerp
3	M. Benscher . . .	Lub.	40	Rotterdam
3	Mercantile Lighterage Co. . .	"	9,750	New York
3	Fielder, Hickman and Co. . .	"	9,800	"
3	Anglo-American Oil Co. . .	"	40,000	"
3	E. J. Walkinshaw . . .	"	10,000	Philadel.
4	Wenningham . . .	Resid.	6,000	Trieste
4	Page, Son and East . . .	Lub Oil and Gr.	360	Antwerp
4	British and Foreign Wharf. . .	Lub.	720	"
4	Mercantile Lighterage Co. . .	"	2,520	New York
4	Adams British Oil Co. . .	"	1,395	"
5	General Steam Nav. Co. . .	"	35	Antwerp
5	J. Harrison . . .	Lub Oil and Gr.	480	"
6	Wilkins, Campbell and Co. . .	Lub Gr.	40	Brussels
6	British Petroleum Co. . .	Lamp (Servian)	1,601,000	Batoum
6	" . . .	Gas	221,000	"
6	" . . .	"	759,300	Kustendje
6	Lubricating & Fuel Oils, Ltd. . .	Lub.	75,000	Batoum
6	Scott's Wharf . . .	"	2,000	New York
6	J. C. Goodall . . .	"	4,000	St. Petersburg
	LIVERPOOL—			
4	Pickfords, Ltd. . .	Lub. Oil and Paste	360	Hamburg
4	Meade-King, Robinson & Co. . .	Lub.	13,720	"
5	" . . .	"	7,800	Baltimore
5	Anglo-American Oil Co. . .	Gas (Genesee)	294,720	Sabine
6	Vacuum Oil Co. . .	Lub.	3,000	New York
6	" . . .	"	2,600	"
6	Meade-King, Robinson & Co. . .	"	2,480	Baltimore
6	Liverpool Storage Co. . .	"	18,680	New York
6	" . . .	Lub. Gr.	38,400	"
6	" . . .	M. Colza	8,200	"
	BRISTOL—			
4	E. Stock and Sons . . .	Lub Oil and Gr.	500	Hamburg
4	" . . .	Lub.	1,000	"
4	Pickford's, Ltd. . .	Lub. Oil and Gr.	410	"
4	Anglo-Bosphorus Oil Co. . .	Lub.	800	"
4	Pickfords . . .	"	520	Antwerp

DATE.	PORT AND IMPORTERS.	DESCRIP- TION.	NO. OF GALLS.	PORT WHENCE.
June.	CARDIFF—			
5	Bristol Steam Nav. Co. . .	Lub.	1,000	Antwerp
	GLOUCESTER—			
4	Bristol Steam Nav. Co. . .	Lub. Gr.	200	Hamburg
	HARWICH—			
4	D. Howard . . .	Lub.	80	Antwerp
	HULL—			
1	Hull & Netherlands SS. Co. . .	Lub.	50	Rotterdam
2	Wilsons and N.E. Railway Shipping Co. . .	"	540	Hamburg
4	T. Wilson, Sons and Co. . .	"	8,000	St. Petersburg
5	W. Gilyott and Co. . .	"	4,000	"
5	T. Wilson, Sons and Co. . .	"	47,400	New York
5	W. Gilyott and Co. . .	"	11,000	"
6	Meade-King, Robinson & Co. . .	Naphtha	29,240	Rotterdam
6	T. Wilson, Sons and Co. . .	Lub.	56,160	New York
	MANCHESTER—			
2	Liverpool Storage Co. . .	"	29,480	"
2	" . . .	Lub. Gr.	1,400	"
2	Bramwell, Fern and Co. . .	Lub.	1,250	"
2	Meade-King, Robinson & Co. . .	"	2,000	"
3	R. F. Sanderson and Co. . .	"	1,040	Riga
4	Pickford's, Ltd. . .	Lub. Oil and Paste	130	Hamburg
6	Anglo-American Oil Co. . .	Gas (Genesee)	668,030	Philadel.
	MIDDLESBRO'—			
4	J. J. Sutherland . . .	Lub.	280	Antwerp
	NEWCASTLE—			
2	P. H. Matthiessen and Co. . .	"	160	Bergen
4	Tyne-Tees S.S. Co. . .	"	1,050	Antwerp
	DUNDEE—			
26/5	A. B. Fleming and Co. . .	"	1,990	Riga
4	D. Alexander and Sons . . .	"	2,000	Hamburg
4	Donaldson Bros. . .	"	1,000	Baltimore
	GLASGOW—			
4	Clyde Shipping Co. . .	Lub. Gr.	1,530	Antwerp
6	J. and A. Allan . . .	Lub.	73,300	Philadel.
6	" . . .	M. Colza	12,500	"
8	Anchor Line . . .	Lub.	20,040	New York
	GRANGEMOUTH—			
4	J. Currie and Co. . .	"	80	Hamburg
	LEITH—			
30	J. Currie and Co. . .	"	240	"
2	G. Gibson and Co. . .	"	200	Antwerp
4	J. Currie and Co. . .	"	400	Hamburg
	Deduct to correct—		5,936,450	
	HULL—			
23/5	T. Wilson, Sons and Co. . .	"	63,360	New York
	Total for Week . . .		5,873,090	

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— QUOTATIONS ON APPLICATION.

IMPORTS.—(Concluded).

FOR THE WEEK ENDED 15TH JUNE, 1908—

DATE.	PORT AND IMPORTER.	DESCRIPTION.	NO. OF GALLS.	PORT WHENCE.
LONDON—				
June				
9	T. H. Lee	Lub. Gr.	1,250	Hamburg
9	Ragosine and Co. ..	Resid.	5,000	Trieste
9	Page, Son and East ..	Lub. Gr.	160	Antwerp
9	"	Lub.	80	"
9	London and India Docks Co.	"	340	Hamburg
10	Anglo-American Oil Co. ..	"	69,800	New York
10	Fielder, Hickman and Co. ..	"	2,600	"
10	G. Haller and Co. ..	"	160	Antwerp
10	British Petroleum Co. (Rocklight)	Gas	335,700	Batoum
11	London and India Docks Co.	Lub.	400	New York
11	Anglo-American Oil Co. (S.O. Co., No. 94)	Gas	1,650,000	Philadel.
11	Anglo-American Oil Co. (City of Everett)	"	923,290	"
11	Page, Son and East ..	Lub.	40	Antwerp
11	J. Harrison	Lub Oil and Gr.	360	"
12	"	Lub. Gr.	200	"
12	Petroles de Grosnyi (Baku Standard)	Benzine	1,283,230	Novorossisk
12	G. Haller and Co. ..	Lub.	40	Antwerp
13	T. H. Lee	"	280	Hamburg
13	London and India Docks Co.	"	1,900	"
15	"	Lamp	40	"
15	Benjamin and Gee ..	Lub.	80	"
15	A. Brown and Co. ..	"	2,560	"
15	Page, Son and East ..	Lub Oil and Gr.	160	Antwerp
15	London and India Docks Co.	Lub.	7,200	New York
LIVERPOOL—				
9	Geo. B. Taylor	"	9,600	"
9	Ismay, Imrie and Co. ..	"	240	"
9	C. C. Wakefield	Lub. Gr.	240	Antwerp
10	Penwarden and Jackson ..	Lub.	200	"
10	Meade-King, Robinson & Co.	"	7,240	Hamburg
10	"	"	24,400	Philadel.
10	Bowring Petroleum Co. ..	"	2,290	"
10	Crew, Levick and Co. ..	"	8,060	"
10	A. Hopps and Sons ..	"	2,090	"
10	Worthington and Boler ..	"	3,600	"
11	W. B. Dick and Co. ..	Lub. Gr.	10,080	"
11	Crew, Levick and Co. ..	Lub.	4,080	"
11	Burnaby and Chantrell ..	Lub. Gr.	1,290	New York
11	Pickfords	Lub. Oil and Paste	150	Hamburg
11	E. H. Kellogg and Co. ..	Lub.	70	Oporto
12	Liverpool Storage Co. ..	"	40	Antwerp
12	Jas. Light and Sons ..	"	2,000	Hamburg
12	Meade-King, Robinson & Co.	"	2,200	Philadel.
13	" (Harry Wadsworth) ..	Lamp	200,350	"
13	"	Gas	518,650	"
13	Valvoline Oil Co. ..	Lub.	5,130	New York
13	Vacuum Oil Co. ..	"	2,000	New York
13	Fellows, Morton & Clayton	"	4,000	"
15	Pickfords	"	240	Antwerp
15	C. W. Field	"	280	"
15	Anglo-American Oil Co. (August Korff)	"	990,800	Philadel.
BARROW—				
13	Anglo-American Oil Co. (Delaware)	Lamp	656,880	"
13	"	Naph.	632,150	"
BRISTOL—				
9	H. R. James and Sons ..	Lub.	5,600	New York
9	W. Smith and Co. ..	"	6,400	"
9	H. Pritchard and Co. ..	Lamp	8,400	"
9	Anglo-Bosphorus Oil Co. ..	Lub. Gr.	200	Hamburg
11	E. Stock and Sons ..	Lub.	2,000	"
11	Pickfords	Lub. Oil and Gr.	630	"
12	Ford and Canning ..	Lub.	670	New York
12	First Anglo-Russian Oil Co.	"	4,480	"
12	H. R. James and Sons ..	"	11,980	"
13	W. Smith and Co. ..	"	26,800	"
13	Anglo-American Oil Co. (Potomac)	Lamp	1,016,390	Philadel.
13	"	Resid. and Gas	269,290	"
CARDIFF—				
11	Bristol S. Navigation Co. ..	Lub.	480	Hamburg
GOOLE—				
11	Goole Steam Shipping Co.	Maz. Oil	1,200	Antwerp
HULL—				
9	G. Hardy and Co. ..	Lub.	140	"
9	Hull and Neth. S.S. Co. ..	"	320	Rotterdam
13	"	"	3,720	"
11	Wilsons and N.E. Railway Shipping Co.	"	120	Hamburg
11	"	"	480	Antwerp
12	"	"	480	Hamburg

DATE.	PORT AND IMPORTERS	DESCRIPTION.	NO. OF GALLS.	PORT WHENCE.
June				
MANCHESTER—				
9	G. B. Taylor	Lub.	2,880	Hamburg
9	J. T. Fletcher and Co. ..	"	240	Antwerp
11	J. Smith and Co. ..	"	250	Hamburg
11	Lamport and Holt ..	"	1,200	New York
12	Manchester Liners ..	"	9,200	Philadel.
13	George B. Taylor ..	"	2,400	"
13	Pickfords	"	80	Hamburg
13	Liverpool Storage Co. ..	"	1,200	New York
13	G. B. Taylor ..	"	79,960	"
15	Bramwell, Fern and Co. ..	"	7,220	Philadel.
15	Crew, Levick and Co. ..	"	12,630	"
15	"	M. Colza	9,440	"
15	Worthington and Boler ..	Lub.	1,050	"
NEWCASTLE—				
11	Tyne-Tees Steamship Co. ..	"	3,080	Antwerp
13	"	"	2,680	"
GLASGOW—				
12	Donaldson Bros. ..	"	2,600	Baltimore
GRANGEMOUTH—				
9	W. Graham-Yooll and Co. ..	Lamp	3,760	Hamburg
9	J. Currie and Co. ..	Tar Oil	400	"
9	"	Lub.	400	"
9	"	L. Paste	570	"
13	"	Lub.	4,000	"
13	"	"	10,480	"
13	"	"	40	"
LEITH—				
9	G. Gibson and Co. ..	"	400	Antwerp
9	J. Currie and Co. ..	"	160	Hamburg
13	"	"	880	"
BELFAST—				
10	J. C. Pinkerton and Co. ..	"	560	"
11	British Petroleum Co. (Augusta)	Gas	845,000	Baltimore
CORK—				
9	Palgrave, Murphy and Co.	Lub.	90	Hamburg
			9,753,850	
Deduct to Correct—				
LONDON—				
25/4	Ocean Oil Co. ..	Lub.	4,000	Philadel.
BARROW—				
1/6	Asiatic Petroleum Co. (Teland)	Spirit	39,420	Pulo Samboe
MANCHESTER—				
13/5	Anglo-American Oil Co. (Potomac)	Lamp	12,240	Philadel.
BELFAST—				
20/5	Anglo-American Oil Co. (Oklahoma)	"	9,660	"
Add to correct—				
LIVERPOOL—				
22/5	A. Hopps and Sons ..	Resid.	5,200	Newp't Nws.
GLASGOW—				
9/6	Clyde Shipping Co. ..	Lub. Gr.	200	Antwerp
LONDON—				
6/8	Anglo-American Oil Co. (August Korff)	Lub.	1,900	Philadel.
Total for the Week ..			9,695,830	
Total for the Fortnight ..			15,568,920	

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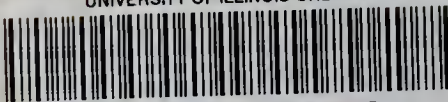
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